Titel: CUT-OFF WHEEL COMPRISING A DOUBLE CORE CLAMPING DEVICE

Patentnummer: WO2006042352A1

Anmeldung: WO2005AT00413
EP20050794457
DE200550014360T
US20050576660
JP20070535945T
CA20052580972
CN200580035876
KR20077011560
AT20040001749
BR2005PI17078
EG20070000384
MX20070004322
RU20070118639
UA20070004583
ZA20070003143

Priorität: AT20040001749 20041019
EP20050794457 20051018
WO2005AT00413 20051018
WO2005AT00413 20070521

Patentfamilie: WO2006042352A1
EP1812206B1
EP1812206A1
DE502005014360D1
US8113920B2
US2007232212A1
JP4571192B2
JP2008515652T2
CA2580972C
CA2580972A
CN101043978A
CN101043978B
KR20070070229A
KR100879394B1
AT502285B1
AT502285A1
BRPI0517078A
EG25574A
MX2007004322A1
RU2366563C2
RU2007118639A
UA88650C2
ZA2007033143A

Anmelder: GISSING GERHARD
GISSING GERKHARD

Erfinder: GISSING GERHARD
GISSING GERKHARD
The invention relates to a composite system for a cut-off wheel (1), in particular with a diameter greater than 400 mm, consisting of an abrasive external cutting ring with depressions (3) on both sides in the vicinity of the bore, two flush-fitting tensioning plates (2) being placed in said depressions to act as a core clamping device. Said clamping plates are reusable elements, retained by the user, and transfer forces to the clamping flanges (4 a +4 b) of the machine. The plates also increase stability and reduce waste.
APPARATUS AND METHOD FOR MANUFACTURING ABRASIVE TOOLS

Patentnummer: EP1745891B1

Anmeldung: EP20060014884
              DE200660003481T
              US20110333111
              US20100910310
              US20070754739
              US20060489324
              JP20110089477
              JP20060197165
              KR20070129071
              KR20060067596
              AT20060014884T

Priorität:   US20050700625P 20050719
              JP20060197165 20060719
              US20060489324 20060719
              US20070754739 20070529
              US20100910310 20101022
              US20110333111 20111221

Patentfamilie: EP1745891B1
               EP1745891A1
               DE602006003481D1
               US8366520B2
               US8357030B2
               US7819722B2
               US7393708B2
               US2012119406A1
               US2011039484A1
               US2007216071A1
               US2007017161A1
               JP2011136417A2
               JP2007021718A2
               JP5329596B2
               JP4778854B2
               KR20080003279A
               KR20070011174A
               KR100849590B1
               KR100849587B1
               AT413256E

Anmelder: ABRASIVE TECH INC
          PETERMAN JR LOYAL M
          VERNIK YEFIM

Erfinder: PETERMAN LOYAL M JR
          VERNIK YEFIM
Zusammenfassung:

Source: US2007017161 AA [EN] A compression molding apparatus and method for the manufacture of abrasive layers for abrasive tooling which provides a compression mold space defined between an inflexible wall surface and a flexible wall surface. The apparatus and method of the present invention is particularly well suited to making annular or hollow cylindrical shaped abrasive layers of novel configurations during a single mold cycle useful for grinding wheel and the like, as well as other shapes such as laps, wherein the flexible wall expanded with fluid pressure provides a highly uniform distribution of pressure against the surface of the mold composition being formed. In an annular configuration, the flexible wall is used to radially direct pressure against a molding composition disposed in an annular configuration wherein the axial length of the annular mold shape formed may be many times greater than priorly obtained by the prior art means.
Title: CHEWING GUM CONTAINING ENCAPSULATED ABRASIVE FILLER SUBSTANCE

Patent number: WO200180661A1

             EP20010909769
             DE20016011626T
             US20010019592
             JP20010577770T
             CA20012377185
             AU20010037395
             CN20018001079
             AT20010909769T
             BR2001P106275
             CZ20020002223
             DK20010909769T
             ES20010909769T
             HK20030101387
             HK20030105131
             HU2002002859
             IN2002CN00095
             IT2000TO00394
             PL20010351400
             PT20010909769T
             RU20020101923
             VN2002000095

Priority: IT2000TO00394 20000426
          WO2001EP01762 20010216

Patent family: WO200180661A1
               EP1276386B1
               EP1276386A1
               DE60111626T2
               DE60111626D1
               US2003099740A1
               JP4253454B2
               JP2003S30865T2
               CA2377185C
               CA2377185A
               AU200137395A5
               AU200137395A1
               CN1366451A
               CN1161033C
               AT298202E
               BRPI0106275A
               CZ2996745B6
               CZ20020223A3
               DK1276386T3
               ES2420422T3
               HK1049095B
               HK1049095A1
               HK1052839A1
               HU2002859AB
               HU2002859AC
               IN206284B
               IT1320188B1
               ITTO20000394A1
               ITTO20000394A0
               PL19982081
               PL351400A1
               PT1276386T
RU2265359C2
RU2002101923A
VN5096A1

Anmelder: COLLE ROBERTO
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PERFETTI SPA
PERFETTI VAN MELE S P A

Erfinder: FUGANTI CLAUDIO
FUGANTI KLAUDIO
KOLLE ROBERTO
ROBERTO COLLE

IPC-Notationen: A23G
A23G0003-30
A23G0004-00
A23G0004-06
A23G0004-12
A23G0004-20
A61K0008-02
A61K0008-11
A61K0008-19
A61K0009-68
A61Q0011-00

CPC-Notationen: A23G0004-064
A23G0004-20

Zusammenfassung:

Source: US2003099740 AA [EN] A chewing gum composition including an abrasive filler substance, the said abrasive filler substance being encapsulated in cross-linked alginate microspheres

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 3
Titel: ADHESIVE BONDED FLEXIBLE ABRASIVE FINISHING TOOL

Patentnummer: DE4413466B4

Anmeldung:
- DE19961051626
- DE1994417209
- DE1994413466
- US19970850210
- US19960736046
- US19960585403
- US19950499678
- US19950479753
- US19940209436
- US19930090770
- US19930052366
- US19920970865
- US19900508060
- US19880228438
- GB19960026837
- GB19960022641
- GB19940013664
- GB19940007193
- IT1994TO00291
- IT1994TO00549
- IT1996TO01099

Priorität:
- US19880228438 19880805
- US19900508060 19900411
- US19920970865 19921103
- US19930052366 19930423
- US19930090770 19930713
- US19940209436 19940310
- GB19940013664 19940707
- US19950479753 19950607
- US19950499678 19950707
- US19960585403 19960111
- US19960736046 19961022
- US19970850210 19970502

Patentfamilie:
- DE4413466B4
- DE4417209A1
- DE4413466A1
- DE19651626A1
- US6129620A
- US6083445A
- US5897431A
- US5788900A
- US5730503A
- US570591A
- US556328A
- US5527213A
- US5318603A
- US5216847A
- US5129191A
- GB2308998B2
- GB2304071B2
- GB2280142B2
- GB2277282B2
- GB2308998A1
- GB2304071A1
- GB2280142A1
- GB2277282A1
GB9626837A0
GB9622641A0
GB9413664A0
GB9407193A0
IT1266871B1
IT1289819B1
IT1273146B
ITTO940291A1
ITTO940549A1
ITTO961099A1
ITTO940291A0
ITTO940549A0

Anmelder:  JASON INC UNA SOCIETA DE L WIS
JASON INC UNA SOCIETA DEL DELA
JASON INC UNA SOCIETA DEL WISCONSIN

Erfinder:  CASER JOSEPH PETER
GASER JOSEPH PETER
SCHEIDER ALFRED A
SCHEIDER ALFRED F
TYLER JAMES BRIAN
WARNER R BROWN
WARNER REUBEN BROWN
WARNER RUEBEN BROWN

IPC-Notationen:  A46B0003-00
A46B0003-10
A46D0003-00
A46D0003-04
B24B0033-00
B24B0033-08
B24D0003-20
B24D0003-28
B24D0003-32
B24D0003-32
B24D0013-00
B24D0013-10
B24D0018-00
B24D0018-0009
B24D0018-0009
B24D2203-00
B29C0045-0013
B29C0045-14311
B29C0045-14336
B29C0045-14385
B29C0045-16
B29C0045-1679
B29C0065-08
B29C0065-43
B29C0065-532
B29C0065-69
B29C0070-025
B29C2793-009
B29L2031-736
C08J0005-14

CPC-Notationen:  A46B0003-10
A46D0003-04
B24B0033-08
B24B0033-086
B24D0003-28
B24D0003-32
B24D0013-10
B24D0018-00
B24D0018-0009
B24D2203-00
B29C0045-14311
B29C0045-14336
B29C0045-14385
B29C0045-16
B29C0045-1679
B29C0065-08
B29C0065-4835
B29C0065-787
B29C0066-1122
B29C0066-43
B29C0066-532
B29C0066-69
B29C0070-025
B29C2793-009
B29L2031-736
Y10T0428-2924
Zusammenfassung:

Source: US5129191 A [EN] An adhesive bonded flexible abrasive finishing tool and method of making the same includes a cup-shape shank of plastic or metal. Flexible nylon abrasive loaded monofilaments of uniform length are formed into a cylindrical bundle. A measured amount of liquid instant cyanoacrylate adhesive is placed into the bottom of the cup portion of the shank and the bundle of monofilaments is driven as a group endwise by a pressure plate through a split funnel mounted on the lip of the cup so that one end of the bundle and thus each monofilament is driven uniformly into the adhesive which then cures rapidly. The monofilaments may preferably be straight or somewhat crimped or wavy and may vary in sectional configuration and abrasive loading. The resulting brush or finishing tool is a low cost light weight tool having improved distribution and density of filaments and a flat even face without a final trimming operation. The tool is ideally suited for automated or robotics finishing operations.
Zusammenfassung:

Source: US2013302751 AA [EN] Provided are abrasive assemblies and related methods that combine a head portion including an integral abrasive member and a drive portion including a resilient cylindrical mandrel. The abrasive member has a receptacle that is complementary to a working end of the mandrel when both members are relaxed. As the abrasive member engages to, or disengages from, the mandrel, the receptacle resiliently expands and the working end of the mandrel resiliently compresses, each in cooperation with the other. Optionally, the abrasive member is maintained in compression in both directions parallel and perpendicular to the longitudinal axis of the mandrel. Advantageously, these assemblies provide for superior retention and slip resistance, ease-of-use, and high manufacturing tolerances.
Titel: DUAL TAPERED SHAPED ABRASIVE PARTICLES
Patentnummer: WO2011068714A3
Anmeldung: WO2010US57713
              EP20100834962
              DE201060062551T
              US20100498636
              JP20120542088T
              CN201080052633
              KR20127016682
              BR20121113346
Priorität: US20090266000P 20091202
           EP20100834962 20101123
           US20100498636 20101123
           WO2010US57713 20101123
Patentfamilie: WO2011068714A3
               WO2011068714A2
               EP2507013B1
               EP2507013A4
               EP2507013A2
               DE602010062551D1
               US9447311B2
               US2012227333A1
               JP5651190B2
               JP2013512788T2
               CN102666017A
               CN102666017B
               KR20120114276A
               KR101863969B1
               BR112012013346B1
               BR112012013346A2
Anmelder: 3M INNOVATIVE PROPERTIES CO
          ADEFRIS NEGUS B
          BRAUNSCHWEIG EHRICH J
          KEIPERT STEVEN J
Erfinder: EHRICH J BRAUNSCHWEIG
          NEGUS B ADEFRIS
          STEVEN J KEIPERT
IPC-Notationen: A46B0015-00
               B24D0003-00
               B24D0003-02
               B24D0003-34
               B24D0011-00
               B24D0018-00
               C09C0001-68
               C09K0003-14
CPC-Notationen: B24D0003-00
               B24D0003-34
               B24D0011-00
               C09C0001-625
               C09K0003-14
               C09K0003-1409
Zusammenfassung:

Source: US2012227333 AA [EN] Shaped Abrasive particles comprising alpha alumina and having a first side, a second side, a maximum length along a longitudinal axis and a maximum width transverse to the longitudinal axis. The first side comprising a quadrilateral having four edges and four vertices with the quadrilateral selected from the group consisting of a rhombus, a rhomboid, a kite, or a superellipse. The shaped Abrasive particles having an aspect ratio of the maximum length divided by the maximum width of 1.3 or greater
Title: NONWOVEN SURFACE TREATING ARTICLES, SYSTEM INCLUDING SAME, AND METHOD OF TREATING CALCIUM CARBONATE-CONTAINING SURFACES WITH SAID SYSTEM

Patentnummer: EP0562919B1
Anmeldung: EP19930400695
DE19936002736T
US19920853919
ES19930400695T

Priorität: US19920853919 19920319
Patentfamilie: EP0562919B1
EP0562919A1
DE69302736T2
DE69302736D1
US5282900A
ES2089744T3

Anmelder: 3M CO
MINNESOTA MINING AND MFG

Erfinder: KYLE ROBERT C
MCDONELL JAMES A

IPC-Notationen: A47L0013-16
A47L0013-17
B24D0003-00
B24D0003-20
B24D0003-28
B24D0003-34

CPC-Notationen: A47L0013-17
B24D0003-20
B24D0003-346
B24D0003-002
B24D0003-28

Zusammenfassung:
Source: US5282900 A [EN] A nonwoven surface treating article suitable for treating surfaces which include calcium carbonate, such as marble floors, includes an open, lofty, three-dimensional nonwoven web of a plurality of thermoplastic organic fibers, a binder, and abrasive particles having an average particle diameter ranging from about 0.1 micrometer to about 30 micrometers. The abrasive articles of the invention do not rust, as do steel wool pads, and produce a high gloss, durable surface. A system for treating calcium carbonate-containing surfaces is also presented, the system including the articles and an acidic crystallization agent. Methods of treating calcium carbonate-containing surfaces with the system are also presented

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 7
Titel: NONWOVEN ABRASIVE ARTICLE INCLUDING ABRASIVE PARTICLES

Patentnummer: WO2018006012A1

Anmeldung: WO2017US40364
            WO2017US37654
            EP20170821390
            US20170311850
            JP20180568726T
            CN201780041100
            BR20181177487
            MX2019000108

Priorität: US2016035754OP 20160701
          US20170311850 20170630
          WO2017US40364 20170630

Patentfamilie: WO2018006012A1
                WO2018005111A1
                EP3478448A1
                EP3478448A4
                US2019202032A1
                JP2019527147T2
                CN109414802A
                BR112018077487A2
                MX2019000108A1

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: HOLMES DEAN S
         MOREN LOUIS S
         POLUHA LAURIE L
         ROBINETTE S ALKHAS
         RONALD D APPLE

IPC-Notationen: A47L0013-16
                B24D0003-00
                B24D0003-28
                B24D0003-32
                B24D0003-34
                B24D0011-00
                B24D0011-02
                B24D0018-00
                C09K0003-14
                D04H0001-413
                D04H0001-4374
                D04H0001-58

CPC-Notationen: A47L0013-16
                B24D0003-002
                B24D0003-28
                B24D0003-32
                B24D0011-00
                B24D0011-005
                B24D0011-02
                C09K0003-14

Zusammenfassung:
Source: US2019202032 AA [EN] Various embodiments disclosed relate to nonwoven abrasive article including abrasive particles. In various embodiments, the present invention provides a nonwoven abrasive article including a nonwoven web including fibers and pores between the fibers. The nonwoven abrasive article includes abrasive particles, wherein each of the pores between the fibers independently includes one or more of the abrasive particles. Each pore is independently about the same size as the one or more abrasive particles therein.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 8
The invention relates to a coated abrasive tool (10) comprising a carrier (12) which has a carrier material and comprising an abrasive surface coating (14) on a surface region (12-A) of the carrier (12). The abrasive surface coating (14) has abrasive functional particles (16) and a thermoplastic binder (18) for an adhesive connection between at least some of the abrasive functional particles (16) and the carrier material. At least some of the abrasive functional particles (16) on the surface region (12-A) of the carrier (12) are partly integrated into the carrier material and are connected to the carrier material, and at least some of the abrasive functional particles (16) on the surface region (12-A) of the carrier (12) are additionally partly integrated into the thermoplastic binder (18), said thermoplastic binder (18) being connected to the abrasive functional particles (16) and the carrier material.
Titel: Abrasive dental articles

Patentnummer: EP0530646A1

Anmeldung: EP19920114463
US19920992014
JP19920228823
CA19922075406
AU19920020898
KR19920015624
TW19920106184

Priorität: US19910753204 19910830
CA19922075406 19920806
KR19920015624 19920829
US19920992014 19921217

Patentfamilie: EP0530646A1
US5273559A
JP5245166A2
CA2075406A
AU651232B2
AU199220898A1
KR940004027A
KR19940004027A
KR19930004433A
TW221967B

Anmelder: 3M CO
HONAM PETROCHEMICAL CORP
MINNESOTA MINING AND MFG

Erfinder: DABURIYU JIEEMUSU HAMAA
HAMMAR JAMES W C O MINNESOTA M
JOOS RICHARD W C O MINNESOTA M
JOOS RICHARD WILLIAM
RICHIYAADO UIRIAMU JIYOOZU

IPC-Notationen: A61C0003-06
A61C0010-00
A61K0006-09
B24D0003-20
B24D0003-28
B24D0003-32
C09K0003-14
G06F0012-16

CPC-Notationen: A61C0003-06
A61C0017-005
B24D0003-32

Zusammenfassung:
Source: US5273559 A [EN] An abrasive composition and dental articles made from same, the composition including abrasive particles dispersed throughout and entrapped within a polyurea or polyurethane urea matrix which contains soft and hard segments wherein the matrix is made from the polymerization reaction of a polyfunctional amine and a polyfunctional isocyanate. The abrasive dental articles include prophylactic cups and polishing wheels, points and discs.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 10
Title: DENTAL POLISHING ARTICLE WHICH CONTAINS SPHERICAL RESIN PARTICLES

Patentnumber: WO2006121080A1

Anmeldung: WO2006JP309404
DE200611001202T
US20060920133
JP20070528302T
CN200680016016

Priorität: JP20050138131 20050511
JP20050182739 20050623
JP20070528302 20060510
WO2006JP309404 20060510

Patentfamilie: WO2006121080A1
DE112006001202B4
DE112006001202T5
US8070842B2
US2009068614A1
JP2006121080A1
JP5084504B2
JP5084504B1
CN101170962A
CN101170962B

Anmelder: ASAO OSAMU
SHOFU KK
SONOI SYUJI

Erfinder: OSAMU ASAO
SYUJI SONOI

IPC-Notationen: A61C0003-06
B24D0003-00
B24D0003-02
B24D0003-22
B24D0003-32
B24D0011-00
C09K0003-14

CPC-Notationen: A61C0003-06
B24D0003-32

Zusammenfassung:

Source: US2009068614 AA [EN] The present invention provides a dental polishing article having excellent polishability, which can polish dental composite resin, porcelain, dental restorative and prosthetic materials and teeth at a low cost, conveniently in a short time. More specifically, the present invention provides a dental polishing article which comprises a polishing portion formed by compounding polishing grains in an elastomer binder, and the polishing portion further comprising spherical resin particles

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 11
DENTAL COMPOSITIONS INCLUDING THERMALLY RESPONSIVE ADDITIVES, AND THE USE THEREOF

Patentnummer: WO2007075666A1
Anmeldung: WO2006US48400
EP20060839425
US20050275240
JP20080547435T
Priorität: US20050275240 20051220
WO2006US48400 20061218
Patentfamilie: WO2007075666A1
EP1962773A1
US2007142498A1
JP2009520569T2
Anmelder: 3M INNOVATIVE PROPERTIES CO
BRENNAN JOAN V
EVERAERTS ALBERT I
JAMES DARRELL S
KALGUTKAR RAJDEEP S
MAHONEY WAYNE S
MYER AJAY
NGUYEN LANG N
OXMAN JOEL D
Erfinder: BRENNAN JOAN V
EVERAERTS ALBERT I
JAMES DARRELL S
KALGUTKAR RAJDEEP S
MAHONEY WAYNE S
MYER AJAY
NGUYEN LANG N
OXMAN JOEL D
IPC-Notationen: A61C0007-00
A61K0006-00
A61K0006-02
A61K0006-08
A61K0006-884
C09K0003-00
CPC-Notationen: A61K0006-30

Zusammenfassung:
Source: US2007142498 AA [EN] Hardenable and hardened dental compositions that include thermally responsive additives, and articles including such hardenable and hardened compositions, are provided. Upon heating, the hardened compositions are useful for reducing the bond strengths of orthodontic appliances adhered to tooth structures with the hardened compositions.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 12
Zusammenfassung:
Source: US2015196991 AA [EN] Incorporating hard particles in a matrix forming the surface of a member can significantly increase wear resistance. Practical use of diamond in industrial applications is limited as the carbon structure breaks down to graphite in air at temperatures over 700 degrees centigrade. When exposed to molten iron the diamond surface can also chemically react and dissolve into the iron. Metal compounds that coat the diamond can provide one or more protective layers that limit contact of the diamond surface with elements that will degrade its structure. Coating can also provide a wettable surface for the molten matrix during processing to improve retention of the particle in the matrix.
Titel: SURFACE TREATING ARTICLES AND METHODS OF MAKING SAME

Patentnummer: WO9426468A1

Anmeldung: WO1994US03038
EP19940912822
DE19946022513T
US19940184507
US19930060616
JP19940525402T
CA19942160904
AU19940065218
CN19941092062
KR19957000500
KR19950705000
TW19940102754
AT19940912822T
BR1994PI06598
CL19940000651
CZ19950002967
FI19950005426
HU19950001995
NO19950004549
NZ19940263948
PL19940314488
RU19950122823
TR19940000432
ZA19940003119

Priorität: US19930060116 19930512
US19930060616 19930512
US19940184507 19940119
WO1994US03038 19940322

Patentfamilie: WO9426468A1
EP0697937B1
EP0697937A1
DE69422513T2
DE69422513D1
US5492550A
US5306319A
JP3479075B2
JP8510175T2
CA2160904A
AU669805B2
AU199465218A1
CN1126963A
KR19967002372A
KR19960702372A
TW263524B
AT188411E
BRP19406598A
CL1994000651A1
CZ296795A3
CZ9502967A3
FI955426A
FI955426A0
HU72724A2
HU9501995A0
NO954549L
NO954549A
NO954549A0
Zusammenfassung:

Source: US5306319 A [EN] Surface treating articles having varying degree of smear-resistance and their methods of manufacture are presented. One preferred article is characterized by an organic matrix substantially engulfed by a novel, tough, adherent elastomeric resinous binder system comprising the reaction product of either (1) a polyurethane prepolymer, or (2) a polyurethane polymer emulsion with an epoxy-functional material and an amine-functional material in an aqueous system.
Title: ABRASIVE COMPACT WITH IMPROVED MACHINABILITY

Patent number: WO2008074010B1

Application: WO2007US87442
EP20070855135
DE200760021375T
US20130748934
US20070518745
JP20150102776
JP20130107985
JP20090541595T
AU20070333027
CN201510217177
CN200780046099
KR20097011963
AT20070855135T
BR2007PI20462
IN2009KN02466
MX2009006183
PL20070855135T
ZA20090003695
ZA20130009737

Priority: US20060869804P 20061213
CN200780046099 20071213
EP20070855135 20071213
JP20090541595 20071213
JP20090541595T 20071213
JP20130107985 20071213
US20070518745 20071213
WO2007US87442 20071213
US20090518745 20090611
US20130748934 201301124
JP20150102776 20150520

Patent family: WO2008074010B1
WO2008074010A1
EP2101903B1
EP2101903A1
DE602007021375D1
US8597387B2
US8404010B2
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BRPI0720462A2
IN266476B
IN02466KN2009A
MX2009006183A1
PL2101903T3
Zusammenfassung:

Source: US2010043303 AA [EN] An abrasive compact may include an ultra-hard phase that may include ultra-hard particles having a Knoop hardness of 5000 KHN or greater, a sinter catalyst, and a reaction phase that may include a catalyst-ceramic compound having a Knoop hardness lower than that of the ultra-hard phase.
Title: DIAMOND FOR A TOOL AND A PROCESS FOR THE PRODUCTION OF THE SAME

Patentnummer: DE3232869C2

Anmeldung: DE19823232869
US19820414821
JP19870225171
JP19820124512
JP19820095104
JP19810192772
JP19810138644
GB19820025302
FR19820015073
SE19820004983
ZA19820006340

Priorität: JP19810138644 19810904
JP19810192772 19811202
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JP19820124512 19820719
JP19870225171 19870910

Patentfamilie: DE3232869C2
DE3232869A1
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JP58041769A2
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FR2512430A1
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SE457537B
SE8204983A0
ZA8206340A

Anmelder: SUMITOMO ELECTRIC INDUSTRIES LTD

Erfinder: TETSUO NAKAI
YATSU SHIYUJI
YATSU SHUJI
YAZU SHUJI
Zusammenfassung:

Source: US4505746 A [EN] An improved diamond compact of the present invention comprises 20 to 85 percent by volume of diamond grains with a grain size of at least 3 μm and the balance of a binder consisting of 20 to 95 percent by volume of ultra-fine diamond grains with a grain size of at most 1 μm, at least one member with a grain size of at most 1 μm, selected from the group consisting of carbides, carbonitrides, nitrides, borides of Group 4a, 5a and 6a elements of Periodic Table, solid solutions thereof and mixed crystals thereof and at least one member selected from the group consisting of iron group metals.
Title: SHAPE ABRAVIVE PARTICLES WITH AN OPENING

Patentnumber: WO2010077518A1

Anmeldung: WO2009US66199
            EP20090836639
            US20120398295
            US20080337112
            JP20110542206T
            CN200980154705
            KR20117016297
            BR2009PI18330

Priorität: US20080337112 20081217
            WO2009US66199 20091201
            US20120398295 20120216

Patentfamilie: WO2010077518A1
                EP2385889B1
                EP2385889A1
                EP2385889A4
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                US8142532B2
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                CN102281993A
                CN102281993B
                KR20110093946A
                KR101800900B1
                BRPI0918330A2

Anmelder: 3M INNOVATIVE PROPERTIES CO
           ADEFRIS NEGUS B
           BODEN JOHN T
           CULLER SCOTT R
           ERICKSON DWIGHT D
           HAAS JOHN D

Erfinder:  ERICKSON DWIGHT D
           HAAS JOHN D
           JOHN T BODEN
           JONH D HAAS
           NEGUS B ADEFRIS
           SCOTT R CULLER

IPC-Notationen: B01J0002-22
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                B24D0003-02
                B24D0003-04
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                C09K0003-1409
                C09K0003-1418
                Y10T0428-24364
                Y10T0428-24413
                Y10T0428-257
                Y10T0428-2982
Zusammenfassung:
Source: US2010151201 AA [EN] An abrasive comprising shaped abrasive particles each with an opening. The shaped abrasive particles are formed from alpha alumina and have a first face and a second face separated by a thickness t. The opening in each of the shaped abrasive particles can improve grinding performance by reducing the size of a resulting wear flat, can provide a reservoir for grinding aid, and can improve adhesion to a backing in a coated abrasive article.
Titel: COATED ABRASIVE ARTICLE AND METHOD OF MAKING THE SAME

Patentnummer: WO2016160357A1

Anmeldung: WO2016US22884
EP20160773731
DE2016002563ST
US20190385781
US20160549281
JP2017050668T
CN201680019277
KR20177030746
BR20171120767

Priorität: US20150140262P 20150330
US20150160429P 20150512
US20150181612P 20150618
EP20160773731 20160317
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WO2016US22884 20160317
US20170549281 20170807
US20190385781 20190416

Patentfamilie: WO2016160357A1
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US2019240810A1
US2018029194A1
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JP2018510073T2
CN107427991A
CN107427991B
KR20170133400A
BR112017020767A2

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: STEVEN J KEIPERT

IPC-Notationen: B01J0002-22
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C09K0003-14

CPC-Notationen: B01J0002-22
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C09K0003-14
C09K0003-1409
Zusammenfassung:

Source: US2018029194 AA [EN] A coated abrasive article includes a backing, a make layer, crushed abrasive particles, and a size layer. The crushed abrasive particles include: 35 to 100 weight percent of initial crushed abrasive particles having a first composition and first size grade, wherein a majority of the initial crushed abrasive particles are platey crushed abrasive particles, and wherein each platey crushed abrasive particle has a respective length, width, and thickness; and 0 to 65 weight percent of crushed filler particles having a second composition and a second size grade. The first and second compositions and/or size grades are different. The coated abrasive article has a direction of intended use, a majority of the platey crushed abrasive particles of the coated abrasive article are positioned with their thickness oriented substantially parallel to the direction of intended use. A method of making the coated abrasive article is also disclosed.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 18
Erfinder: DIGIOVANNI ANTHONY A
GAURAV AGRAWAL
RICHARD BENNETT
SOMA CHAKRABORTY

IPC-Notationen: B01J0003-06
B01J0019-00
B01J0019-10
B22F0005-00
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B01J2203-0685
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B22F2304-056
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C09K0003-1436
C22C0026-00
C23F0001-02
C23F0001-28
E21B0010-55
E21B0010-567
Y10T0428-2982
Zusammenfassung:

Source: US2011252711 AA [EN] A method of forming a polycrystalline diamond comprises derivatizing a nanodiamond to form functional groups, and combining the derivatized nanodiamond with a microdiamond having an average particle size greater than that of the derivatized nanodiamond, and a metal solvent-catalyst. A polycrystalline diamond compact is prepared by adhering the polycrystalline diamond to a support, and an article such as a cutting tool may be prepared from the polycrystalline diamond compact.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 19
**Title:** EXPLOSIVE POWDER CHARGE OPERATED SETTING TOOL

**Patent Number:** EP0782902B1

**Application:**
- EP19960810713
- EP19960810524
- EP19960308923
- DE19966026759T
- DE19966026759
- DE19965006761T
- DE19965005124
- DE19951048870
- DE19951047859
- US19980087776
- US19960780078
- US19960762174
- US19950571312
- JP19960347230
- JP19960343724
- JP19960325776
- AU19960075447
- CN19961023287
- KR19960064371
- KR19960063832
- KR19960042174
- TW19960113473
- TW19960109861
- ES19960308923T

**Priority:**
- US19950571312 19951212
- JP19950347603 19951215
- DE19951047859 19951221
- JP19950339450 19951226
- DE19951048870 19951227
- DE19965006761T 19960808
- US19980087776 19980529

**Patent Family:**
- EP0782902B1
- EP0780195B1
- EP0779129B1
- EP0782902A1
- EP0780195A1
- EP0779129A3
- EP0779129A2
- DE19548870A1
- DE19547859A1
- DE69626759T2
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- DE59606761D1
- DE59605124D1
- US6132675A
- US5950900A
- US5855996A
- US5767434A
- JP9254039A2
- JP9183081A2
- JP9183080A2
- JP9307763B2
- AU70441082
- AU199675447A1
- CN1159379A
- CN1061584C
Anmelder: GEN ELECTRIC
GEN EREKUTORITSUKU CO
HILTI AG

Erfinder: ANTON HIRUTOURU
CORRIGAN FRANCIS RAYMOND
FROMMELT MARKUS
FURANSHISU REIMONDO KORIGAN
HEEB NORBERT
HENRII SAMIYUERU MARUKU
HERUMAN KUERU
HIRTL ANTON
KUEL HERMANN
MAREK HENRY SAMUEL
MARUKUSU FUROMUMERUTO
MARUKUSU SHIYUPURENGAA
NORUBERUTO HEEBU
SCHIRTER ANDONE
SPRENGER MARKUS
SPULUNGER MARCUS

IPC-Notationen: B01J0003-06
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CPC-Notationen: B01J0003-062
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C04B2237-401
C04B2237-61
Y10T0428-24942
Y10T0428-25
Y10T0428-30
Zusammenfassung:

Source: US5767434 A [EN] An explosive powder charge operated setting tool includes a housing (1), a piston guide (13) for a driving piston (9) located in the housing. The driving piston (9) can be propelled from an initial rearward position through a bore (18) in the piston guide (13) into a forward driving position by gases generated from an ignited cartridge charge (12) in a cartridge chamber (10) located rearwardly of the initial rearward position of the driving piston. A channel (18a, 18b) is located in the housing in flow communication with the cartridge chamber and communicating with the guide bore (8) in the piston guide (13). A check valve (5) is positioned in the channel (18a, 18b) and forms a storage space closed to the ambient atmosphere and made up of a section (18a) of the channel (18a, 18b) closer to the forward driving position of the driving piston and of the guide bore (8). The check valve (5) can be closed by the gas in the storage space.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 20
Titel: THERMOSTABLE ABRASIVE DIAMOND-CONTAINING PRODUCT

Patentnummer: EP0246118B1

Anmeldung: EP19870400292
DE1987770520T
US1987050027
FR19860007069
AT19870400292T
ES19870400292T

Priorität: FR19860007069 19860516
EP19870400292 19870209

Patentfamilie: EP0246118B1
EP0246118A1
DE3770520D1
US4798026A
FR2598644B1
FR2598644A1
AT64116E
ES2022385B3

Anmelder: COMBUSTIBLE NUCLEAIRE STE INDLE
IND DE COMBUSTIBLE NUCLEAIRE SOC

Erfinder: CERCEAU JEAN MICHEL

IPC-Notationen: B01J0003-06
B22F0007-06
B24D0003-00
B24D0003-04
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C22C0026-00

CPC-Notationen: B01J0003-062
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B01J2203-0655
B01J2203-0685
B22F0007-06
B24D0003-007
B24D0003-06
B24D0003-10
C22C0026-00

Zusammenfassung:
Source: US4798026 A [EN] A thermostable abrasive diamond product includes a compact formed of diamond grains representing more than 80 percent by volume of the compact, each grain being bonded directly to its neighbors so as to form a polycrystalline structure. The empty spaces between diamond grains are occupied by a binder face containing silicon and/or titanium and nickel silicon (or titanium) and nickel being alloyed. The compact may be bonded by a metallurgical interface to a substrate of a refractory metal such as tungsten.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 21
KR20057004867
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AT19980912072T
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ZA20060007583

Priorität:
US19970832852 19970404
US19970835117 19970404
EP19980912072 19980326
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WO9845091A3
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Anmelder: ALBERTA SCIENCE AND RES AUTHOR KINIK SONG JIAN MIN SUNG CHIEN MIN SUNG JIAN MIN
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Zusammenfassung:
Source: US6039641 A [EN] The present invention describes a diamond tool with diamond bonded chemically by a braze that contains either Cr, Mn, Si, or Al or mixtures or alloys thereof. The diamond tool is made by infiltrating the braze into a matrix metal that contains diamond in either form of grits or polycrystalline bodies.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 22
Carbon bonded abrasive tools and method for producing

A method of producing a carbon bonded abrasive tool by chemical vapor deposition of carbon, such as pyrolytic carbon, diamond, or a polymorphous form of diamond through a preshaped tool, the preshaped tool containing a mixture of abrasive particles, and also the carbon bonded abrasive tool produced by the method. The mixture of abrasive particles may include a mixture of a superabrasive powder and an abrasive powder filler. All or a portion of the filler has been impact processing by subjecting the filler to an uniform super-pressure exceeding one gigapascal to break up the filler into random size particles, some at the original mesh size interspersed with a continuum of smaller particles.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 23
POLYCRYSTALLINE ABRASIVE GRAINS, AND GRINDING WHEEL PROVIDED WITH SAME

Source: WO19208640 A1 [EN] Polycrystalline abrasive grains comprising multiple cBN particles and a binder capable of binding the multiple cBN particles to each other, wherein the binder comprises at least one component selected from a nitride, a carbide and a carbonitride of a metal selected from the group consisting of a metal belonging to Group 4a, a metal belonging to Group 5a and a metal belonging to Group 6a on the periodic table, and the content of the binder in the polycrystalline abrasive grain is 5 to 50 vol percent inclusive.
Titel: THERMALLY STABLE ULTRA-HARD MATERIAL COMPACT CONSTRUCTIONS
Patentnummer: WO2010009430A3
Anmeldung: WO2009US51047
US20120671019
US20090505316
US20070745726
GB20070008915
CA2007588331
Priorität: US20060799104P 20060509
US20070745726 20070508
CA2007588331 20070509
US20080081626P 20080717
US20090505316 20090717
US20120671019 20121107
Patentfamilie: WO2010009430A3
WO2010009430A2
US8328891B2
US8066087B2
US2013291442A9
US2013074420A1
US2009313908A1
US2008142276A1
GB2438073B2
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GB200708915A0
CA2588331C
CA2588331A
Anmelder: GRIFFO ANTHONY
JANSSSEN MICHAEL
KESHAVAN MADAPUSI K
SHEN YUELIN
SMITH INTERNATIONAL
ZHANG YOUHE
Erfinder: GRIFFO ANTHONY
JANSSSEN MICHAEL
KESHAVAN MADAPUSI K
SHEN YUELIN
ZHANG YOUHE
Zusammenfassung:

Source: US2008142276 AA [EN] Thermally stable ultra-hard compact constructions comprise a polycrystalline diamond body substantially free of a catalyst material, and a substrate that is joined thereto. The substrate can be ceramic, metallic, cermet and combinations thereof, and can be joined to the body by a braze material or other material that forms an attachment bond at high pressure/high temperature conditions. The body and substrate are specially formed having complementary interfacing surface features to facilitate providing an improved degree of attachment therebetween. The complementary surface features can in the form of openings and projections, e.g., one of the body or substrate can comprise one or more openings, and the other of the body or substrate can comprise one or more projections, disposed within or extending from respective interfacing surfaces. The complementary surface features operate to resist unwanted delamination between the body and substrate, thereby extending effective service life of the construction.
Zusammenfassung:

Source: RO123271 B1 [EN] The invention relates to abrasive articles or tools of agglomerated powders, such as grinding wheels, segments, discs or bars, having novel compositional structures, so that said novel tool structures are obtained, as well as to methods for grinding, polishing and finishing the surface by using said tools. According to the invention, the tool comprises a three-dimensional composite consisting, in a first phase of 24...48 percent by volume agglomerated abrasive grains with 10...38 percent by volume organic bond material and less than 10 percent by volume porosity, and a second phase consisting of 38...54 percent by volume porosity, where the second phase is a continuous phase within the composite. The claimed method comprises the following steps: a first step consisting in providing an abrasive tool of agglomerated powders which contains a three-dimensional composite, a second step consisting in mounting the abrasive tool of agglomerated powders on a surface grinding machine, a third step consisting in rotating the wheel and the final step consisting in bringing the grinding surface of the wheel into contact with a workpiece for a sufficient period of time as to grind the workpiece, this way the wheel removing the workpiece material at an effective material removal rate while the grinding surface of the wheel remains substantially free of grinding debris and, after grinding has been completed, the workpiece being substantially free of thermal damage

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 26
Title: POROUS ABRASIVE ARTICLES WITH AGGLOMERATED ABRASIVES AND METHOD FOR MAKING THE AGGLOMERATED ABRASIVES

Patentnummer: US2008293345A1
Anmeldung: US20080221074
Priorität: US20020120969 20020411
             US20030668531 20030923
             US20060330673 20060112
             US20080221074 20080731
Patentfamilie: US2008293345A1
Anmelder: SAINT GOBAIN ABRASIVES INC
          SAINT GOBAIN SA
Erfinder: BRIGHT ERIC
          WU MIANXUE

IPC-Notationen: B02C0011-08
                B24B0001-00
                B24B0005-00
                B24B0005-36
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                B24D0003-18
                B24D0003-26
                B24D0003-32
                B24D0003-348
                B24D0018-00
                C09K0003-14
                C09K0003-1436

CPC-Notationen: B24B0005-363
                B24D0003-18
                B24D0003-26
                B24D0003-32
                B24D0003-348

Zusammenfassung:
Source: US2008293345 AA [EN] A bonded abrasive tool, having a structure permeable to fluid flow, comprises sintered agglomerates of a plurality of abrasive grains and a binding material, the binding material being characterized by a melting temperature between 500 and 1400 degrees centigrade, and the sintered agglomerates having a loose packing density of less than or equal to 1.6 g/cc and three-dimensional shape; a bond material; and about 35-80 volume percent total porosity, including at least 30 volume percent interconnected porosity. Methods for making the sintered agglomerates and abrasive tools containing the sintered agglomerates are described.
Titel: SANDPAPER WITH NON-SLIP LAYER

Patentnummer: WO2012125335A3

Anmeldung: WO2012US27843
WO2012US27839
EP20120758232
EP20120757364
US20120412955
US20120412924
CA20122829624
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AU20120229419
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CN201280012753
CN201280012224
BR20131123250
BR20131123251
MX20130010357
MX20130010416

Priorität: US20110451678P 20110311
US20110451680P 20110311
US20110498685P 20110620
US20120412924 20120306
US20120412955 20120306
WO2012US27839 20120306
WO2012US27843 20120306

Patentfamilie: WO2012125335A3
WO2012125335A2
WO2012125334A1
EP2683526A1
EP2683527A4
EP2683526A4
EP2683527A2
US10377018B2
US2012231708A1
US2012231707A1
CA2829624A
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AU2012229419B2
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AU2012229419A1
AU2012229418A1
CN103442852A
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CN103442852B
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BR112013023250A2
BR112013023251A2
MX352925B
MX2013010357A1
MX2013010416A1

Anmelder: 3M INNOVATIVE PROPERTIES CO
3M INNOVATIVE PROPERTIES CO
PAHL THOMAS E
PETERSEN JOHN G
WALD MICHAEL P

Erfinder: PETERSEN JOHN G
THOMAS E PAHL
WALD MICHAEL P
Source: US2012231707 AA [EN] The present invention provides an **abrasive** article, e.g. a sheet of sandpaper, comprising a backing layer having opposed first and second major surfaces, an adhesive make coat on the second major surface, **abrasive** particles at least partially embedded in the make coat, thereby defining an **abrasive** surface, and an exposed non-slip coating layer on the first major surface, the non-slip coating layer comprising at least a base resin and a tackifying resin.
Zusammenfassung:

Source: US4735632 A [EN] Coated abrasive binders made from a photocurable addition-polymerizable composition containing a free-radically-polymerizable monomer and a photoinitiator system containing (i) an arylidonium salt, (ii) a sensitizing compound, and (iii) an electron donor having an oxidation potential that is greater than zero and less than or equal to that of p-dimethoxybenzene (1.32 volts vs. S.C.E.). The binders cure rapidly and deeply under ultraviolet or visible light, even when filled with large amounts of mineral grain or with coarse grades of minerals.
Titel: GRINDING TOOLS THAT CONTAIN UNIFORM DISTRIBUTION OF ABRASIVE GRITS AND METHOD OF MANUFACTURE THEREOF

Patentnummer: WO2009026776A1

Anmeldung: WO2008CN000331
EP20080706508
US2008249851
CA20082645301
AU2008291565
CN20071009468

Priorität: CN20071009468 20070828
WO2008CN000331 20080213
WO2008CN000331 20080213

Patentfamilie: WO2009026776A1
EP2184134A1
US2009094902A1
CA2645301A
AU2008291565A1
CN101376234A
CN101376234B

Anmelder: JIAXIANG HOU

Erfinder: JIAXIANG HOU

IPC-Notationen: B05D0005-02
B22F0001-00
B22F0003-12
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B22F0007-00
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B24D0003-04
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B24D0017-00
B24D0018-00
B24D0099-00
C04B0035-645
C30B0030-00

CPC-Notationen: B24D0007-066
B24D0018-0045
B24D0018-0054
B24D0099-005

Zusammenfassung:
Source: US2009094902 AA [EN] The present invention relates to a method of uniformly distributing abrasive grits on grinding tools. It can be applied in the cutting, grinding segments of diamond tools, which are typically used in cutting and drilling various hard and fragile materials, such as granite, marble, concrete, asphalt, etc. The present invention provides a template, the template designed based on the arranging requirement of abrasive particles such as diamond grits. The template can adsorb only a single layer of abrasive particles and is then placed onto a sheet, where the diamond grits are pressed into the sheet, with the diamond grits distributed uniformly on the sheet.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 30
Titel: FIBER-CONTAINING DIAMOND-IMPREGNATED CUTTING TOOLS

Patentnummer: WO2013028256A8

Anmeldung:
WO2015US22965
WO2012US44003
WO2007US86156
EP20120826384
EP20070865035
US20160378992
US20140319763
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TR20170010983T
ZA20090003902
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ZA20140002147
ZA20160006563

Priorität:
US20060867882P 20061130
US20070917016P 20070509
AU20070342231 20071130
EP20070865035 20071130
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WO2007US86156 20071130
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WO2012US44003 20120625
AU20120211429 20120808
AU20120211431 20120808
Patentfamilie:
WO2013028256A8
WO2013028256A3
WO2008085616A3
WO2013028256A2
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EP2092155B1
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CN103748309A
CN101652533A
CN103748309B
CN101652533B
BR102012001234A2
Zusammenfassung:

Source: US2008128170 AA [EN] Fibers for diamond-impregnated cutting tools and their associated methods for manufacture and use are described. The cutting tools contain a diamond-impregnated cutting portion that contains fibers made from carbon, glass, ceramic, polymer, and the like. The fibers can be in any form, including chopped and milled fibers. The fibers may also be coated with metal, ceramic, or other performance-enhancing coatings. The fibers may be used to both control the tensile strength control the erosion rate of the matrix to optimize the cutting performance of the tools. Additionally, the fibers may also weaken the structure and allow higher modulus binders to be used for the cutting tools at a lower cost, allowing the amount of fibers to be tailored to retain the diamonds in the cutting portion for the desired amount. And as the cutting portion erodes, the fibers may also increase the lubricity at the face of the cutting portion. Using the fibers allows the cutting tools to last longer and make them safer and more economical because they need to be replaced less often.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 31
Zusammenfassung:
Source: US2010044114 AA [EN] An article of manufacture includes a cemented carbide piece, and a joining phase that binds the cemented carbide piece into the article. The joining phase includes inorganic particles and a matrix material. The matrix material is a metal and a metallic alloy. The melting temperature of the inorganic particles is higher than the melting temperature of the matrix material. A method includes infiltrating the space between the inorganic particles and the cemented carbide piece with a molten metal or metal alloy followed by solidification of the metal or metal alloy to form an article of manufacture.
Titel: CUBIC BORON NITRIDE COMPACT
Patentnummer: WO2006046128A1
Anmeldung: WO2005IB03230
WO2005IB03221
WO2005IB03218
EP20050819756
EP20050809957
EP20050797919
DE200560048366T
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DE200560035794T
US20110281769
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US20050718119
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JP20070538534T
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BR2005PI18063
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ZA20070003479

Priorität: IE20040000721 20041029
IE20040000722 20041029
EP20050797919 20051028
EP20050809957 20051028
EP20050819756 20051028
WO2005IB03218 20051028
WO2005IB03221 20051028
WO2005IB03230 20051028
US20070718119 20071029
US20110281769 20111026
Patentfamilie:
WO2006046128A1
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EP1831130B1
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US2009056232A1
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KR101226376B1
BRPI0517359A
BRPI0517360A
BRPI0518063A
PL1831130T3
ZA200703475A
ZA200703476A
ZA200703479A

Anmelder:
ANDERSIN STIG AKE
CAN NEDRET
ELEMENT SIX ABRASIVES SA
ELEMENT SIX PRODUCTION PTY LTD
FRIES ROBERT
GOUDEMOND IAIN PATRICK
Zusammenfassung:
Source: US2009056232 AA [EN] A CBN compact comprises CBN and a matrix phase incorporating a secondary hard phase selected from TiCN, TiC, TiN and mixtures and solid solutions thereof and a maximum amount of titanium diboride where the XRD peak height of the (101) titanium diboride peak (after background correction) is less than 12 percent of the peak height of the (111) CBN peak
Titel: SINTERED ABRASIVE PARTICLES, METHOD OF MAKING THE SAME, AND ABRASIVE ARTICLES INCLUDING THE SAME

Patentnummer: WO2014165390A1

Anmeldung: WO2014US32043
EP20140780310
US20190511962
US20140782475
JP20190085818
JP20160506336T
CN2014800093

Priorität: US20130808955P 20130405
JP20160506336T 20140327
US20140782475 20140327
WO2014US32043 20140327
US20150782475 20151005
JP20190085818 20190426
US20190511962 20190715

Patentfamilie: WO2014165390A1
EP2981378A1
EP2981378A4
US10400146B2
US201938172A1
US2016068729A1
JP2019178061A2
JP6550374B2
JP2016521235T2
CN105102158A
CN105102158B

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: ERICKSON DWIGHT D
ROSENFLANZ ANATOLY Z

IPC-Notationen: B22F0001-00
B22F0003-10
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B24D0003-04
B24D0003-06
B24D0011-00
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C01F0007-02
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C04B0035-111
C04B0035-626
C09K0003-14

CPC-Notationen: C01F0007-027
C01F0007-38
C01P2004-03
C01P2004-45
C01P2004-61
C01P2004-62
C04B0035-1115
C04B0035-62665
C04B0035-6268
C04B2235-3218
C09K0003-1409
Zusammenfassung:
Source: US2016068729 AA [EN] A method of making sintered abrasive particles includes passing alumina precursor particles through a flame under conditions such that they are converted to alpha alumina. The precursor particles comprise a precursor of alpha alumina and have an average particle size of less than or equal to 500 microns. Sintered abrasive particles have a cellular microstructure comprising alpha alumina crystal grains of alpha alumina having a maximum dimension of less than about 3 microns are also disclosed. The sintered abrasive particles have an average particle size of less than or equal to 500 microns, and are essentially free of seed particles and alpha alumina grain size modifiers. Abrasive articles comprising a binder and a plurality of the sintered abrasive particles are also disclosed.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 34
Titel: ABRASIVE TOOL
Patentnummer: WO9824593A1
Anmeldung: WO1997US18277
                EP19970910868
                DE19976029653T
                US19960753838
                JP19980525564T
                CA19972272258
                AU19970048139
                CN19971080258
                KR19997004862
                TW19970117437
                AR1997P105622
                AT19970910868T
                BR1997P13559
                CO19970070524
                DK19970910868T
                ES19970910868T
                NZ19970335752
Priorität: US19960753838 19961202
                EP19970910868 19971002
                WO1997US18277 19971002
Patentfamilie: WO9824593A1
                EP0946332B1
                EP0946332A1
                DE69729653T2
                DE69729653D1
                US5976205A
                JP20000516156T2
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                CN1170657C
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                AR020303AA
                AT269779E
                BRPI9713559A
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                NZ335752A
Anmelder: NORTON COMPANY
          SAINT GOBAIN ABRASIVES INC
Erfinder: ANDREWS R M
          ANDREWS RICHARD M
          BOYLE SCOTT
          OWEN R L
          OWEN ROBERT L
          POULIMENOS CHRIS S
          WALLAHORA RICHARD W
**Zusammenfassung:**
Source: US5976205 A [EN] The present invention provides a metal bonded abrasive tool wherein the tool has improved life and mechanical properties. The invention further includes the bond composition which allows for improved life and mechanical properties, particularly in diamond blade dressing tools.

**Datum des Suchlaufs:** 07.04.2021  
**Dokument Nr.:** 35

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**IPC-Notationen:**  
- B22F0003-00  
- B22F0003-23  
- B22F0007-06  
- B24D0003-00  
- B24D0003-04  
- B24D0003-06  
- C22C0001-05

**CPC-Notationen:**  
- B22F0003-23  
- B22F0007-06  
- B22F2005-001  
- B24D0003-06  
- C22C0001-05  
- C22C0001-051  
- Y10S0076-12  
- Y10T0407-1904  
- Y10T0407-27
Titel: DOUBLED-SIDED AND MULTI-LAYERED PCD AND PCBN ABRASIVE ARTICLES

Patentnummer: WO2006099194A3

Anmeldung: WO2006US08691
WO2004US28035
EP20060737829
US20050077995
US20030655758

Priorität: US20030655758 20030905
US20050077995 20050310
WO2006US08691 20060310

Patentfamilie: WO2006099194A3
WO2006099194A2
WO2005025805A1
EP1877223A4
EP1877223A2
US2005210755A1
US2005050801A1

Anmelder: CHO HYUN SAM
HAN KYUNG RYUL
SONG KI JEON

Erfinder: CHO HYUN SAM
HAN KYUNG RYUL
SONG KI JEON

IPC-Notationen: B22F0003-00
B22F0007-00
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B23B0027-14
B24D0003-02
C09C0001-68
C09K0003-14

CPC-Notationen: B21C0003-025
B22F0007-008
B22F0007-06
B22F0007-062
B22F0007-08
B22F2005-001
B22F2005-002
B22F2998-00
B23B0027-141
B23B0027-148
B23B2226-125
B23B2226-315
B23B2240-08
B23B2270-54
B23P0015-28
B24D0003-06
B24D0018-00
C04B0035-5831
C22C0026-00
C22C2026-006
Y10T0428-12028
Y10T0428-12056
Y10T0428-24355
Y10T0428-30
Zusammenfassung:
Source: US2005050801 AA [EN] A doubled-sided PCD or PCBN compact as well as a new multi-layered PCD and PCBN can be produced using high pressure high temperature processes allowing for increased effective thickness of abrasive tools. A polycrystalline compact can include a substrate having a first surface and a second surface which are non-contiguous. Additionally, a first polycrystalline layer can be attached to the first surface of the substrate and a second polycrystalline layer attached to the second surface of the substrate. The first and second polycrystalline layers can include superabrasive particles bonded together by sintering or chemical bonding with an additional metal. Such double-sided PCD and PCBN compacts as well as a new multiple layered PCD and PCBN allow for increased effective thickness of a tool without suffering from non-homogenous results typical of standard PCD and PCBN compacts, regardless of superabrasive particle size. Each polycrystalline layer can include superabrasive particles of varying particle sizes such that the final tool is tailored for specific abrading characteristics. Such doubled-sided and/or multiple layered PCD and PCBN compacts can be incorporated into a wide variety of abrasive tools for use in cutting, milling, grinding, polishing, drilling and other similar abrasive applications.
Zusammenfassung:
Source: US2016221080 AA [EN] A bonded diamond body having a high bonded strength is provided. The bonded diamond body includes a sintered polycrystalline diamond body, a hard substrate, and a hard layer provided between the sintered polycrystalline diamond body and the hard substrate, the sintered polycrystalline diamond body containing a diamond grain and a sintering aid, the hard substrate containing tungsten carbide and cobalt, and the hard layer containing cobalt and a hard grain made of a carbide, a nitride, or a carbonitride having a Vickers hardness of 1100 Hv or more

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 37
A POLYCRYSTALLINE SUPER HARD CONSTRUCTION AND A METHOD FOR MAKING SAME

Source: US2015298292 AA [EN] A polycrystalline super hard construction comprising a body of polycrystalline diamond (PCD) material and a plurality of interstitial regions between inter-bonded diamond grains forming the polycrystalline diamond material; the body of PCD material comprises a working surface positioned along an outside portion of the body; a first region substantially free of a solvent/catalysing material; a second region remote from the working surface that includes solvent/catalysing material in a plurality of the interstitial regions; and a substrate attached to the second region along an interface. The first region extends a depth from the working surface and the thickness of the second region between the interface with the substrate and an interface with the first region is between around 20 microns to around 200 microns at one or more points along the interface with the substrate.
CUTTING ELEMENTS HAVING A NON-UNIFORM ANNULUS LEACH DEPTH, EARTH-BORING TOOLS INCLUDING SUCH CUTTING ELEMENTS, AND RELATED METHODS

Source: US2015283618 AA [EN] Polycrystalline diamond compact (PDC) cutting elements include leached and un-leached regions. The leached region may be or include a leached annular region. An inner boundary of the leached annular region remote from a side surface of the polycrystalline diamond may have a non-linear profile in a plane extending through the PDC cutting element along a longitudinal axis of the cutting element. Methods of forming PDC cutting elements include configuring polycrystalline diamond of a PDC cutting element to have such a leached annular region with a non-linear profile. Earth-boring tools may be formed that include such PDC cutting elements.
Titel: SUPERHARD CONSTRUCTIONS AND METHODS OF MAKING SAME

Patentnummer: WO2014191555A3

Anmeldung: WO2014EP61267
US20180208053
US20140892712
GB20140009616
GB20130009798
CN201480039267

Priorität: GB20130009798 20130531
WO2014EP61267 20140530
US20150892712 20151120
US20180208053 20181203

Patentfamilie: WO2014191555A3
WO2014191555A2
US2019337123A1
US2016144483A1
GB2516359B2
GB2516359A1
GB201409616A0
GB201309798A0
CN105392584A
CN105392584B

Anmelder: ELEMENT SIX ABRASIVES SA

Erfinder: MAWEJA KASONDE
OZBAYRAKTAR MEHMET SERDAR
VALENTINE KANYANTA

IPC-Notationen: B22F0007-06
B23B0027-00
B23B0051-00
B23C0005-00
B23D0077-00
B24D0003-00
B24D0003-06
B24D0003-14
B24D0007-18
E21B0010-00
E21B0010-46
E21B0010-567
E21B0010-573

CPC-Notationen: B22F0007-06
B23B0027-00
B23B0051-00
B23B2222-28
B23B2226-125
B23B2226-315
B23C0005-00
B23C2222-28
B23C2226-125
B23C2226-315
B23D0077-00
B23D2277-2435
B23D2277-245
B23D2277-2464
B24D0003-001
B24D0003-006
B24D0003-14
B24D0007-18
E21B0010-00
E21B0010-46
E21B0010-567
E21B0010-573
E21B0010-5735
Zusammenfassung:

Source: US2016144483 AA [EN] A superhard polycrystalline construction (1) comprises a body (12) of polycrystalline superhard material having a cutting face (14) and a substrate (10) bonded to the body of polycrystalline superhard material along an interface (18). The substrate comprises a substrate body and a first end surface (20) forming the interface, the first end surface of the substrate comprising a projection extending from the body of the substrate into the body of superhard material towards the cutting face. The projection has an outer peripheral surface around which the body of polycrystalline superhard material extends. The body of polycrystalline superhard material has a thickness (h) from the cutting face along the peripheral side edge (13) to the interface with the substrate of at least around 4 mm and at least a portion of the projection has a thickness measured in a plane extending along the longitudinal axis of the construction of at least around 4 mm. There is also disclosed a method of making such a superhard polycrystalline construction.
Titel: ABRASIVE PRODUCT

Patentnummer: EP0046374B1

Anmeldung: EP19810303687
DE19813167088T
US19810292124
JP19810127667
CA19810383579
AU19810074051
ZA19810004916

Priorität: ZA19800004996 19800814
ZA19800007383 19801126
ZA19810004916 19810717
CA19810383579 19810811
JP19810127667 19810814

Patentfamilie: EP0046374B1
EP0046374A3
EP0046374A2
DE3167088D1
US4378975A
JP57054076A2
JP5037792B4
JP1839014C3
CA1193870A1
AU542351B2
AU198174051A1
ZA8104916A

Anmelder: DAVIES AULETTE
DE BEERS IND DIAMOND
DE BEERS INDUSTRIAL DIAMOND DIVISION LTD
DE BIAZU IND DIAMONDO DEIBIJON LTD
TOMLINSON PETER N

Erfinder: DAVIES AULETTE
OORETSUTO DEEBISU
PIITAA NOERU TOMURINSON
TOMLINSON P N
TOMLINSON PETER NOEL

IPC-Notationen: B22F0007-06
B24D
B24D0003-00
B24D0003-04
B24D0003-06
C04B0035-52
C09K0003-14
C22C0026-00
E21B0010-46
E21B0010-56
E21B0010-567

CPC-Notationen: B22F0007-06
B22F2999-00
B24D0003-06
C09K0003-1445
C22C0026-00
E21B0010-46
E21B0010-5676
E21B0010-567
Zusammenfassung:
Source: US4378975 A [EN] The invention provides an abrasive body which will generally be of cylindrical shape comprising a plurality of superhard abrasive particles such as diamond bonded together by means of a tough wear-resistant nickel based alloy having a melting point of below 1000 DEG C. These alloys are known as hard facing alloys. The abrasive bodies may be used as inserts for drill crowns. The bodies are made by mixing the abrasive particles with the alloy in powdered form, producing a green-state, coherent body from the mixture, generally by cold pressing, and sintering the green-state product under conditions which inhibit degradation of the abrasive particle.
POLYCRYSTALLINE SUPER HARD CONSTRUCTION AND A METHOD FOR MAKING SAME

Source: US2015259987 A1

A polycrystalline super hard construction comprising a body of polycrystalline diamond (PCD) material and a plurality of interstitial regions between inter-bonded diamond grains forming the polycrystalline diamond material; the body of PCD material comprises a working surface positioned along an outside portion of the body; a first region substantially free of a solvent/catalysing material; and a second region remote from the working surface that includes solvent/catalysing material in a plurality of the interstitial regions. The first region extends to a depth of at least about 800 microns from the working surface into the body of polycrystalline diamond material.
Titel: Composite of bonded cubic boron nitride crystals on a silicon carbide substrate

Patentnummer: US4110084A
Anmeldung: US19770787858
Priorität: US19770787858 19770415
Patentfamilie: US4110084A
Anmelder: GEN ELECTRIC
Erfinder: LEE MINYOUNG
SZALA LAWRENCE E

IPC-Notationen: B22F0007-06
B24D0003-08
E21B0010-56
E21B0010-567

CPC-Notationen: B22F0007-06
B24F2999-00
B24D0003-08
E21B0010-567

Zusammenfassung:
Source: US4110084 A [EN] A mass of cubic boron nitride (CBN) crystals, aluminum or aluminum alloy and a silicon carbide ceramic substrate are disposed in a container which is placed within a pressure-transmitting powder medium. Pressure ranging from about 20,000 psi to about 200,000 psi is applied to the powder medium resulting in substantially isostatic pressure being applied to the container and its contents. To the resulting shaped substantially-isostatic system of powder-enveloped container, heat and pressure are applied simultaneously whereby the aluminum or aluminum alloy is liquefied and infiltrated through the interstices between the CBN crystals and diffused into the contacting face of the silicon carbide substrate sufficiently to produce, upon cooling, an adherently bonded integral composite.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 43
Titel: ABRASIVE PRODUCT

Patentnummer: EP0449547B1

Anmeldung: EP19910302569
DE19916010075T
US19910675144
JP19910132454
GB1990006703
CA19912038661
AU19910073723
KR19910004689
TW19910102785
AT19910302569T
IE19910000984
ZA19910002120

Priorität: GB1990006703 19900326
CA19910073723 19910325

Patentfamilie: EP0449547B1
EP0449547A3
EP0449547A2
DE69110075T2
DE69110075D1
US5137543A
JP6091409A2
GB9006703A0
CA2038661A
AU640469B2
AU199173723A1
KR19910016444A
KR1002086428B1
TW200421B
AT123245E
IE67061B
IE910984A1
ZA9102120A

Anmelder: DE BEERS IND DIAMOND
DE BEERS INDUSTRIAL DIAMOND DIVISION PROPRIETARY
DENHAM CHRISTOPHER E
HEATH PETER J

Erfinder: DENHAM CHRISTOPER ERIC
DENHAM CHRISTOPHER ERIC
HEAT PETER JAMES
KURISUTOFUAA ERITSUKU DENHAMU
PETER JAMES HEATH
PITAA JIEEMUSU HIIUSU

IPC-Notationen: B23B0027-14
B23B0027-16
B23C0005-16
B23C0005-20
B24D0003-00
B24D0003-28
B24D0007-14
B24D017-00
B24D0099-00
E21B0010-46
E21B0010-58

CPC-Notationen: B23B0027-148
B23B0027-1622
B23B2200-201
B23B2226-125
B23B2226-315
B23B2226-61
B24D0099-00
E21B0010-58
Zusammenfassung:

Source: US5137543 A [EN] A tool insert comprises a composite abrasive compact bonded to a polymer-based support. The composite abrasive compact consists of a compact layer bonded to a substrate and is bonded to the support through bonding surfaces. The composite abrasive compact provides a cutting edge for the tool insert.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 44
Titel: GROUP IVB BORIDE BASED CUTTING TOOLS FOR MACHINING GROUP IVB BASED MATERIALS

Patentnummer: WO9426469A1

Anmeldung: WO1994US03557
EP19970120371
EP19940914753
DE19970120371T
DE19946033019T
DE19946011163T
DE19940914753T
US19950425566
US19950425163
US19930060772
JP19940525411T
CA19942237074
CA19942146665
AU19940066996
CN19941090666
KR19957004987
KR19950704987
AT19940120371T
AT19940914753T
ES19940914753T
ES19970120371T
RU19950122465

Priorität: US19930060772 19930510
CA19942146665 19940331
CA19942237074 19940331
EP19940914753 19940331
WO1994US03557 19940331
WO1994US03559 19940331
US19950425163 19950420
US19950425566 19950420

Patentfamilie: WO9426469A1
EP0844050B1
EP0697938B1
EP0697938A1
EP0844050A3
EP0697938A4
EP0844050A2
DE69433019T2
DE69411163T2
DE0844050T1
DE0697938T1
DE69433019D1
DE69411163D1
US5632941A
US5580836A
US5427987A
JP2879475B2
JP7509187T2
CA2237074A
CA2146665A
AU674225B2
AU199466996A1
CN1114103A
KR960702373A
KR19967002373A
Zusammenfassung:

Source: US5427987 A [EN] A densified titanium diboride based ceramic composition is provided having W and Co therein and a fine grain size. The composition has particular usefulness as a cutting tool for the machining of titanium based alloys at high speeds.
Titel: Crenelated abrasive tool
Patentnummer: WO9822260A1
Anmeldung: WO1997US17581
EP19970945370
DE19976008914T
US19960749370
JP19980523637T
CA19972271806
CN19971099980
KR19997004455
TW19970115475
AT19970945370T
Priorität: US19960749370 19961121
WO1997US17581 19970930
Patentfamilie: WO9822260A1
EP0946333B1
EP0946333A1
DE69708914T2
DE69708914D1
US5868125A
JP2000510773T2
CA2271806A
CN1238717A
KR20000057165A
TW474857B
AT210003E
Anmelder: NORTON CO
SAINT GOBAIN ABRASIVES INC
Erfinder: MAOUJOD MOHAMMED
MAOUJOUT MOHAMMED
IPC-No.: B23B0051-04
B24D0003-00
B24D0003-04
B24D0003-06
B24D0005-00
B24D0005-06
B24D0005-14
B24D0007-00
B24D0007-06
B24D0007-18
B28D0001-02
B28D0001-04
B28D0001-12
B28D0001-14
CPC-No.: B24D0003-06
B28D0001-121
Zusammenfassung:

Source: US5868125 A [EN] An abrasive tool for cutting extremely abrasive-resistant materials includes a novel, abrasive segment with a generally crenelated, rectangular appearance. The segment has a single piece vein of a primary abrasive and first bond material extending completely along the length of the segment. The vein transverses the width of the segment at least once in a non-linear path and alternately coincides with inner and outer faces. Gaps between the vein and the faces opposite the vein coincident faces are occupied by a second bond material, and optionally, a secondary abrasive, thus forming multiple, separated abrasive regions. The bottom surface of the segment is attached to a core at an operative perimeter which defines the cutting edge of the tool. The segment can be adapted to conform to the curvature of diverse cutting edges, and thus can be used in rotary and reciprocating saw blades and core drilling bits. The crenelated construction of the abrasive segment provides a fast cutting, durable tool incorporating less of costly superabrasives, such as diamond, than comparable tools. Despite an intricate configuration of primary and secondary abrasives within the segment, the novel tool has enhanced structural integrity. A method of making the novel abrasive tool is provided in which primary abrasive and first bond material are compacted to shape a vein preform which is presintered in a vein mold to produce a green vein. The green vein is placed in a segment mold and then second bond material and optional secondary abrasive are, deposited in cavities between the vein and segment faces to create separated abrasive regions. The segment is sintered to cure the bond material permitting the segment to be attached to the operative perimeter of the tool core as a unit. The method of making the abrasive tool is fast which contributes to low fabrication costs.
Cutting-off wheel for dry cutting metals, stones and other hard materials comprises thin disc with granular grinding agent and sealed with barrier of sealing substance keeping water away from pores.

Source: DE10049317 A1 [EN] The cutting off wheel is formed by a thin disc with granular grinding agent, filler and reinforcement structure. It is sealed with a barrier of sealing substance (7) to keep out water from the pores (6) and cavities (10). The sealing substance can be paraffin or paint.
Zusammenfassung:

Source: US6273082 BA [EN] Structurally independent cutting members are formed with abrasive material comprising a plurality of particles protruding through a surface of the retaining material comprising a mesh material for durable cutting members; and, the structurally independent cutting members are selectively continuous or discontinuous and spatially mounted along the working edge of a core. Some of the cutting members or portions of the cutting members are arranged for stock removal, and some are arranged for gauge keeping. Since the individual portions of the cutting portions are separate, more stock removal portions can be included, with fewer gauge keeping portions as may be required. The structurally independent cutting members may have a variety of profile shapes, such as contoured configurations to provide stock removal using high pressure cutting forces applied normal to the cutting face of the workpiece and gauge keeping functions using low pressure cutting forces applied laterally to the cutting face to the workpiece.
Titel: ABRASIVE CUTTING TOOL
Patentnummer: US5791330A
Anmeldung: US19950480715
Priorität: US19910712989 19910610
US19910741678 19910807
US19930024649 19930301
US19950480715 19950607
Patentfamilie: US5791330A
Anmelder: ULTIMATE ABRASIVE SYSTEMS LLC
Erfinder: TSELESIN NAUM N
IPC-Notationen: B23D0061-02, B23D0061-18, B24D0003-06, B24D0005-10, B24D0005-12, B24D0011-00, B24D0018-00, B28D0001-12, C22C0032-00

Zusammenfassung:
Source: US5791330 A [EN] Structurally independent cutting members are formed with abrasive material comprising a plurality of particles protruding through a surface of the retaining material comprising a mesh material for durable cutting members; and, the structurally independent cutting members are selectively continuous or discontinuous and spatially mounted along the working edge of a core. Some of the cutting members or portions of the cutting members are arranged for stock removal, and some are arranged for gauge keeping. Since the individual portions of the cutting portions are separate, more stock removal portions can be included, with fewer gauge keeping portions as may be required. The structurally independent cutting members may have a variety of profile shapes, such as contoured configurations to provide stock removal using high pressure cutting forces applied normal to the cutting face of the workpiece and gauge keeping functions using low pressure cutting forces applied laterally to the cutting face to the workpiece.
Zusammenfassung:

Source: US2013008422 AA [EN] An outer blade cutting wheel comprising an annular thin disc base of cemented carbide and a blade section of metal or alloy-bonded abrasive grains on the outer periphery of the base is provided. The abrasive grains are diamond and/or cBN grains having an average grain size of 45-310 micro m and a Ti of at least 150. The blade section includes overlays having a thickness tolerance (Tmax-Tmin) of 0.001 mm to 0.1xT2 mm. The blade section has a roundness (ODmax/2-ODmin/2) of 0.001 mm to 0.01xODmax mm
Titel: SAW WIRE AND METHOD OF MANUFACTURING SAW WIRE
Patentnummer: WO2010071198A1
Anmeldung: WO2009JP71129
            EP20090833500
            US20090140770
            JP20100543012T
            CN200980156938
            KR20117014448
            TW20090143606
            IN2011CN05062
            MY20110002859
            VN20110001897
Priorität:  JP20080322369 20081218
            JP20080322370 20081218
            JP20090205363 20090904
            JP20100543012 20091218
            WO2009JP71129 20091218
Patentfamilie: WO2010071198A1
               EP2390055A1
               EP2390055A4
               US2011308371A1
               JP2010071198A1
               JP5516420B2
               JP5516420B1
               CN102317037A
               CN102317037B
               KR20110102890A
               KR101509852B1
               TW201043366A
               TWI455781B
               IN05062CN2011A
               MY155774A
               VN18795A1
Anmelder:  MORITA MITSURU
            NIPPON STEEL AND SUMITOMO METAL CORP
            NIPPON STEEL MATERIALS CO LTD
            SAKAMOTO HIROAKI
            TANAKA MASAMOTO
            TATSUMI KOHEI
Erfinder:  MORITA MITSURU
            SAKAMOTO HIROAKI
            TANAKA MASAMOTO
            TATSUMI KOHEI
IPC-Notationen: B23D0061-18
                B23D0063-00
                B23D0065-00
                B24D0003-00
                B24D0003-04
                B24D0003-06
                B24D0003-08
                B24D0011-00
                B24D0018-00
                B24D0061-185
                B23D0065-00
                B24D0003-08
                B24D0011-00
                B24D0018-00
                B24D0018-0018
                Y10T0083-909
Zusammenfassung:

Source: US2011308371 AA [EN] There are provided a fixed-abrasive grain saw wire with a superior cutting performance and a manufacturing method thereof. Particularly, there are provided a fixed-abrasive grain saw wire with abrasive grains adhered to a metal wire via a Zn-based or Sn-based low-melting-point metal and a high-melting-point metal having a melting point higher than that of the low-melting-point metal, and a manufacturing method thereof.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 51
<table>
<thead>
<tr>
<th>Titel:</th>
<th>ABRASIVE ARTICLE AND METHOD OF FORMING</th>
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<tbody>
<tr>
<td>Patentnummer:</td>
<td>WO2014172611A1</td>
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| Anmeldung: | WO2014US34611  
              EP20140786083  
              US20140256209  
              JP20160509117T  
              JP20160509117  
              CN201480032995  
              KR20157032805  
              TW20140114089  
              IN2015DN10032  
              RU20150149282 |
| Priorität: | US20130813815P 20130419  
              US20130813833P 20130419  
              US20140256209 20140418  
              WO2014US34611 20140418 |
| Patentfamilie: | WO2014172611A1  
                EP2986416A1  
                EP2986416A4  
                US9409243B2  
                US2014311472A1  
                JP2016515478A2  
                JP6109409B2  
                JP2016515478T2  
                CN105283271A  
                CN105283271B  
                KR20150143809A  
                TW201441355A  
                IN10032DN2015A  
                RU2015149282A |
| Anmelder: | SAINT GOBAIN ABRASIFS SA  
              SAINT GOBAIN ABRASIVES INC |
| Erfinder: | KHAUND ARUP K  
              REHRIG PAUL W  
              TIAN YING GANG |
| IPC-Notationen: | B23D0061-18  
                   B23D0065-00  
                   B24B0027-06  
                   B24D0003-00  
                   B24D0003-02  
                   B24D0003-34  
                   B24D0011-00  
                   B28D0001-02  
                   B28D0005-00  
                   B28D0005-04  
                   C09K0003-14  
                   H01L0021-304  
                   H01L0021-306  
                   H01L0021-67 |
| CPC-Notationen: | B23D0061-185  
                  B23D0065-00  
                  B24B0027-0633  
                  B24D0011-00  
                  B24D0099-00  
                  H01L0021-304  
                  H01L0021-30625  
                  H01L0021-67092 |
Zusammenfassung:

Source: US2014311472 AA [EN] An abrasive article including a substrate as an elongated member, a first layer overlying the substrate, abrasive particles overlying the first layer, fillets connecting the first layer and the abrasive particles, a bonding layer overlying the abrasive particles, the first layer and the fillets, and the fillets have a fillet characteristic relative to an abrasive application, the fillet characteristic selected from the group consisting of tacking factor (tfl/tf), a fillet-to-particle factor (tf/dab), a fillet-to-bonding layer factor (tf/tbl), a contact factor (Ab/Al), a fillet size variance (Vf), and a combination thereof.
**Titel:** ABRASIVE ARTICLES INCLUDING ABRASIVE PARTICLES BONDED TO AN ELONGATED BODY, AND METHODS OF FORMING THEREOF

**Patentnummer:** WO2011020109A3

**Anmeldung:**
- WO2010US45647
- EP20100808875
- US20100857374
- JP20120524936T
- CA20102770508
- CN201080040120
- KR20127005648
- IN2012MN00623
- MX2012001809
- RU20120108943

**Priorität:**
- US20090234205P 20090814
- US20100857374 20100816
- WO2010US45647 20100816

**Patentfamilie:**
- WO2011020109A3
- WO2011020109A2
- EP2464486A2
- US9028948B2
- US2011045292A1
- JP5537660B2
- JP2013501637T2
- CA2770508C
- CA2770508A
- CN102665988A
- CN102665988B
- KR20120040730A
- KR101433750B1
- IN00623MN2012A
- MX2012001809A1
- RU2508968C2
- RU20120108943A

**Anmelder:**
- DING RAN
- LIEBELT SUSANNE
- SAINT GOBAIN ABRASIFS S A
- SAINT GOBAIN ABRASIVES INC
- SEHN GOBEHN ABRAZIF
- SEHNT GOBEHN EHBREJIVS INK
- SUBRAMANIAN KRISHNAMOORTHY
- TIAN YINGGANG

**Erfinder:**
- RAN DING
- SUBRAMANIAN KRISHNAMOORTHY
- SUSANNE LIEBELT
- YINGGANG TIAN

**IPC-Notationen:**
- B23D0061-18
- B23D0065-00
- B24B0027-06
- B24D0003-06
- B24D0003-10
- B24D0011-00
- B24D0018-00
- B28D0001-02
- D02G0003-00
- D06N0007-02

**CPC-Notationen:**
- B23D0061-185
- B23D0065-00
- B24D0003-06
- Y10T0428-24372
- Y10T0428-2916
- Y10T0428-2927
- Y10T0428-2944
Zusammenfassung:
Source: US2011045292 AA [EN] An abrasive article includes an elongated body, a bonding layer including a metal overlying a surface of the elongated body, and a coating layer including a polymer material overlying the bonding layer. The abrasive article further includes abrasive grains contained within the bonding layer and coating layer, and wherein the bonding layer comprises an average thickness (tbl) at least about 40 percent of the average grit size of the abrasive grains.
Anmelder: SAINT GOBAIN ABRASIFS SA
SAINT GOBAIN ABRASIVES INC
SEN GOBEN ABRAZIVS INK

Erfinder: BROSNAN MORIN A
KKHAUND ARUP K
MAUREEN A BROSNAN
PEARLMAN JOHN J
PERLMAN DZHON DZH
TYAN YING GANG
YINGGANG TIAN

IPC-Notationen: B23D0061-18
B24D0003-00
B24D0003-06
B24D0011-00
B24D0018-00
B28D0005-04
H01L0021-304

CPC-Notationen: B23D0061-18
B24D0003-06
B24D0011-00
B24D0018-00
B28D0005-04

Zusammenfassung:
Source: US2016375514 AA [EN] An abrasive article includes a substrate having an elongated body, a plurality of discrete tacking regions defining a discontinuous distribution of features overlying the substrate, where at least one discrete tacking region of the plurality of discrete tacking regions includes a metal material having a melting temperature not greater than 450 degrees centigrade, a plurality of discrete formations overlying the substrate and spaced apart from the plurality of discrete tacking regions, and a bonding layer overlying the substrate, plurality of discrete tacking regions, and plurality of discrete formations.
Titel: ELECTROPLATED TOOL, SCREW-SHAPED GRINDSTONE FOR GRINDING GEAR, METHOD FOR MANUFACTURING ELECTROPLATED TOOL, AND METHOD FOR MANUFACTURING SCREW-SHAPED GRINDSTONE FOR GRINDING GEAR

Patentnummer: WO2017014197A1

Anmeldung: WO2016JP71038
US20160745209
JP20170529887T
CN201680042008
ID2018P0000754
IN201847005129
PH20180500134

Priorität: JP20150142957 20150717
JP20150142958 20150717
WO2016JP71038 20160715

Patentfamilie: WO2017014197A1
US10857652B2
US2019015951A1
JP2017014197A1
JP6605604B1
CN107848051A
ID72508B
ID201807643A
IN201847005129A
PH2018500134A

Anmelder: HONDA MOTOR CO LTD

Erfinder: KOSHINO DAISUKE
KUBODERA YU
NAGAYOSHI SHOGO
OTSUKA TAKAHIRO
TOMIZAWA YUICHI

IPC-Notationen: B23F0021-02
B24B0019-00
B24D0003-00
B24D0003-06
B24D0003-10
B24D0005-06
B24D0007-18
B24D0018-00
C09K0003-14

CPC-Notationen: B23F0021-02
B23F0021-026
B24B0019-009
B24D0003-00
B24D0003-06
B24D0003-06
B24D0005-06
B24D0007-18
B24D0018-0018
C04B2235-427
C09K0003-1409
Zusammenfassung:

Source: US2019015951 AA [EN] Provided are: an electroplated tool; a screw-shaped grindstone for grinding a gear; a method for manufacturing the electroplated tool; and a method for manufacturing the crew-shaped grindstone for grinding a gear. Said tool having a parent material, a plating layer that has a high-level portion and a low-level portion formed as strips on the parent material at different heights along the direction intersecting the processing direction, and electrodeposited abrasive grains exposed from the surface of the plating layer. The difference in height of the plating layer is preferably 50-100 percent of the average particle diameter of the abrasive grains, the width of the high-level portion of the plating layer is preferably 150-200 percent of the average particle diameter of the abrasive grains, and the width of the low-level portion of the plating layer is preferably 100-800 percent of the average particle diameter of the abrasive grains.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 55
A GRINDING TOOL

Grinding tool (100) comprising a grinding portion (110), wherein the grinding portion (110) is shaped according to a predetermined shape (120) and is substantially rotationally symmetric with respect to a symmetry axis. The grinding tool (100) is manufactured according to a dressing process, the dressing process comprising the steps of (a) rotating the grinding tool (100) about the symmetry axis with a cutting speed; and (b) putting cutting means (300) in engagement with the grinding portion (110) and moving the cuttings means (300) along a given path thereby cutting and shaping the grinding portion (110). The cutting means traverses across the grinding portion (110) with a feed rate. The grinding portion (110) is made of a first material, wherein the first material comprises metal-bonded cubic crystalline boron nitride grains, and the cutting means (300) is made of a second material, wherein the second material comprising at least a cubic crystalline boron nitride material and/ordiamond.
Titel: ELECTROLYTIC GRINDING TOOLS
Patentnummer: US3476677A
Anmeldung: US19670705245
Priorität: US19650432801
Priorität: US19650432801 19650215
Patentfamilie: US3476677A
US3377150A
Anmelder: CARBOND CORP
Erfinder: CORLEY WILLIAM G
SERMON GEORGE T
IPC-Notationen: B23H0005-08
B24D0018-00
CPC-Notationen: B23H0005-08
B24D0018-00
Zusammenfassung:
Source: US3476677 A [EN] ABSTRACT OF THE DISCLOSURE An electrolytic grinding wheel having a carbonaceous, electrically conductive matrix with hard abrasive grains uniformly dispersed therein. Means are provided on the wheel to receive electrical current. Electrically conductive, perforate, flexible lamina are bonded within the matrix and extend from the current receiving means to the working surface. This is a division of application Ser. No. 432,801, filed Feb. 15, 1965, now Patent No. 3,377,150
Titel: ABRASIVE TOOL CONTAINING COATED SUPERABRASIVE GRAIN

Patentnummer: EP0864399B1

Anmeldung: EP19980200600
DE19986024061T
US19970813145
JP19980055488
CA19982227009
AT19980200600T
ES19980200600T

Priorität: US19970813145 19970307
CA19982227009 19980115

Patentfamilie: EP0864399B1
EP0864399A3
EP0864399A2
DE69824061T2
DE69824061D1
US5855314A
JP10264034A2
JP3080305B2
CA2227009C
CA2227009A
AT267669E
ES2222550T3

Anmelder: NORTON COMPANY
SAINT GOBAIN ABRASIVES INC

Erfinder: BULJAN SERGEJ TOMISLAV
EAGER THOMAS W
MILLER BRADLEY J
SCHULZ ERIC
SHIUE REN KAE

IPC-Notationen: B23K0001-00
B24D0003-00
B24D0003-02
B24D0003-04
B24D0003-06
B24D0003-10
B24D0011-00
B24D0018-00
C09K0003-14

CPC-Notationen: B24D0003-06
B24D0011-00
B24D0018-00
An abrasive grit for a metal bonded Single Layer abrasive tool includes abrasive grains coated with a first active component. The active component is mechanically-bound to the surface of the superabrasive grains. Preferably the abrasive is a superabrasive, especially diamond, and the first active component is titanium, either in the form of elemental Ti or TiH2. The novel grit is made by mixing the first active powder component in a liquid binder to form an adhesive paste; mixing the paste with the abrasive grains to wet the grains, and drying the mixture to adhere active component to the grains. The coated abrasive can be brazed onto a core to form a Single Layer tool, especially with a brazing composition that includes a bronze alloy and small concentrations of a second active component. During brazing the novel abrasive grains provide excellent surface contact with the brazing composition and the braze strongly bind the grains to the tool core. The brazed composition is easy to chemically or electrochemically strip from the cores of worn abrasive tools to permit reconstruction of the tools.
Titel: POROUS ABRASIVE ARTICLES WITH AGGLOMERATED ABRASIVES AND METHOD FOR MAKING THE AGGLOMERATED ABRASIVES

Patentnummer: WO03086704A1

Anmeldung: WO2003US08946
EP20030746550
DE20031092532T
US20020120969
JP20080184076
JP20030583698T
GB20040024865
CA20032479713
AU20030225955
CN20038008046
TW20030106328
AR2003P101004
AR2006P105823
AT20030009092
BR2003PI09103
CH20030001641
CH20080000162
CZ20040001022
DK20040001739
ES20040050059
FI20040001294
IN2004CN02241
IN2004CN02258
IN2004CN02259
IN2007CN00299
LU20030091109
MX2004PA09888
NO20040004912
PL20030372652
RU20040133326
SE20040002426
SE20040002456
ZA20040007415
ZA20040007550
ZA20040007869

Priorität: US20020120969 20020411
US20020328802 20021224
JP20030583698 20030321
JP20030583698T 20030321
WO2003US08856 20030321
WO2003US08936 20030321
WO2003US08946 20030321
Patentfamilie:
WO03086704A1
EP1492645B1
EP1492645A1
EP1492645A4
DE10392532B4
DE10392532T5
US6679758B2
US2003194947A1
JP2008254175A2
JP5274131B2
JP4199130B2
JP2005522339T2
GB2405410B2
GB2405410A1
GB200424865A0
CA2479713C
CA2479713A
AU2003225955B2
AU2003225955A1
CN1646262A
CN100506477C
TW200406279A
TW1267424B
AR039107AA
AR058771AB
AT500376B1
AT500376A2
BRPI0309103A
CH697786B1
CH697084A
CZ305225B6
CZ20041022A3
DK200401739A5
ES2244349B2
ES2244349AA
FI20041294A
IN218782B
IN219678B
IN221215B
IN00299CN2007A
IN02241CN2004A
IN02258CN2004A
IN02259CN2004A
LU91109A1
MXPA04009888A1
NO20044912L
NO20044912A
PL207106B1
PL372652A1
RU2281851C2
RU2004133326A
SE200402456L
SE529566C2
SE200402426A0
SE200402456A0
ZA200407415A
ZA200407550A
ZA200407869A
Anmelder: SAINT GOBAIN ABRASIVES INC
SAINT GOBAIN ABRASIVES TECH CO
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SAINT GOBAIN SA
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SHELDON DAVID A
VU MIANKSU
WU MIANXUE
XAVIER ORLHAC

IPC-Notationen: B24B
B24B0001-00
B24B0005-36
B24B0005-37
B24D
B24D0003-00
B24D0003-02
B24D0003-18
B24D0003-26
B24D0003-32
B24D0003-34
B24D0005-00
B24D0011-00
B24D0018-00
C09K0003-14

CPC-Notationen: B24B0001-00
B24B0005-36
B24D0003-18
B24D0003-20
B24D0003-26
B24D0003-32
B24D0003-348
B24D0011-00
B24D0018-00
C09K0003-1436

Zusammenfassung:

Source: US2003194947 AA [EN] A bonded abrasive tool, having a structure permeable to fluid flow, comprises sintered agglomerates of a plurality of abrasive grains and a binding material, the binding material being characterized by a melting temperature between 500 and 1400 degrees centigrade, and the sintered agglomerates having a loose packing density of ?1.6 g/cc and three-dimensional shape; a bond material; and about 35-80 volume percent total porosity, including at least 30 volume percent interconnected porosity. Methods for making the sintered agglomerates and abrasive tools containing the sintered agglomerates are described
Zusammenfassung:

Source: US2005113005 AA [EN] A method of abrading a surface of a workpiece with a structured abrasive article in the presence of a liquid comprising water and at least one of a sulfonate or sulfate anionic surfactant.
Zusammenfassung:
Source: WO18028849 A1 [EN] The invention relates to a roughing disc for machining material surfaces, comprising a disc-like main body (3) with a tool side (13) that is able to face towards a tool and a workpiece side (12) that is able to face towards a workpiece, wherein the main body (3) comprises a central cutout (2), through which an axis of rotation (5) passes, for direct or indirect attachment of a drive shaft of the tool, a disc-like carrier layer (6) arranged on the tool side (13), at least one abrasive layer (8a, 8b) and a separating layer between adjacent layers. The carrier layer (6) is formed from a material mixture which is free of additives with an abrasive action and which comprises at least one mineral additive

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 61
Titel: Conductive coated abrasives

Patentnummer: EP0414494B1

Anmeldung: EP19900309151
DE19906009903T
US19900551091
JP19900219898
CA19902023209
AU19900061172
KR19900012835
AT19900309151T
HK19980106181
ZA19900006589

Priorität: US19890396513 19890821
US19900495458 19900316
US19900551091 19900716
CA19902023209 19900813

Patentfamilie: EP0414494B1
EP0414494A3
EP0414494A2
DE69009903T2
DE69009903D1
US5108463B1
US5108463A
JP3188187A2
JP2869169B2
CA2023209C
CA2023209A
AU633956B2
AU199061172A1
KR19910004304A
KR100197820B1
AT107215E
HK1006953A1
ZA9006589A

Anmelder: MINNESOTA MINING AND MANUFACTURING
MINNESOTA MINING AND MFG

Erfinder: BUCHANAN SCOTT JAMES
SCOTT J BUCHANAN C O MINNESOTA
SUKOTSUTO JIEEMUSU BUKIYANAN

IPC-Notationen: B24B
B24D0003-02
B24D0003-34
B24D0018-00
C09K0003-14

CPC-Notationen: B24D0003-344
Zusammenfassung:

Source: US5108463 A [EN] A coated abrasive article having carbon black aggregates incorporated into the construction thereof, in a concentration sufficient to reduce or eliminate the buildup of static electricity during its use.
Titel: ABRASIVE ARTICLES WITH NOVEL STRUCTURES AND METHODS FOR GRINDING

Patentnummer: US2008066387A1

Anmeldung: US20070862946

Priorität: US20020120969 20020411
US20020328802 20021224
WO2003US08936 20030321
US20040510541 20041007
US20070862946 20070927

Patentfamilie: US2008066387A1

Anmelder: SAINT GOBAIN ABRASIFS TECH
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Erfinder: BONNER ANNE M
BRIGHT ERIC
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SHELDON DAVID A

IPC-Notationen: B24B0001-00
B24B0005-36
B24B0005-37
B24D0003-00
B24D0003-02
B24D0003-04
B24D0003-18
B24D0003-26
B24D0003-32
B24D0018-00
C09K0003-14

CPC-Notationen: B24B0001-00
B24B0005-363
B24D0003-18
B24D0003-20
B24D0003-26
B24D0003-32
B24D0003-348
B24D0003-348
B24D0011-00
B24D0018-00
C09K0003-1436

Zusammenfassung:
Source: US2008066387 AA [EN] Bonded abrasive tools, having novel porous structures that are permeable to fluid flow, comprise a relatively low volume percentage of abrasive grain and bond, and a relatively low hardness grade, but are characterized by excellent mechanical strength and grinding performance. Methods for making the abrasive tools utilizing agglomerated abrasive grain are described

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 63
Zusammenfassung:
Source: US2006160476 AA [EN] A bonded abrasive tool, having a structure permeable to fluid flow, comprises sintered agglomerates of a plurality of abrasive grains and a binding material, the binding material being characterized by a melting temperature between 500 and 1400 degrees C, and the sintered agglomerates having a loose packing density of less than or equal to 1.6 g/cc and three-dimensional shape; a bond material; and about 35-80 volume percent total porosity, including at least 30 volume percent interconnected porosity. Methods for making the sintered agglomerates and abrasive tools containing the sintered agglomerates are described
Zusammenfassung:

Source: EP2455185 A2 [EN] A bonded abrasive tool, having a structure permeable to fluid flow, comprises sintered agglomerates of a plurality of abrasive grains and a binding material, the binding material being characterized by a melting temperature between 500 and 1400 degrees centigrade, and the sintered agglomerates having loose packing density of \( \geq 1.6 \text{g/cc} \) and three-dimensional shape; a bond material; and about 35-80 volume percent total porosity, including at least 30 volume percent interconnected porosity. Methods for making the sintered agglomerates e.g., Fig. 1, and abrasive tools containing the sintered agglomerates are described.
Patentfamilie:

WO9931195A1
EP1043379A1
EP1043379A4
US8616936B2
US8162725B2
US8137159B2
US7963825B2
US7871308B2
US7115021B2
US6343976B1
US2012227331A1
US2011312251A1
US2008271383A1
US2007266642A1
US2006248804A1
US2002090895A1
JP2007129249A2
JP2007129248A2
JP2007129247A2
JP2007123922A2
JP2007123921A2
JP2007118180A2
JP2007111856A2
JP2004153286A2
JP11181403A2
JP1999031195A1
JP4788588B2
JP4788587B2
JP4788586B2
JP4788585B2
JP4776519B2
JP4776518B2
JP3727241B2
JP3727241B1
CA2605696A
CA2315057A
AU199916838A1
CN1821339A
CN1480503A
CN1282362A
CN101423747A
CN101423747B
CN1321166C
CN1128195C
CN100567441C
KR20070042588A
KR20070039624A
KR20060132049A
KR20060132048A
KR20060132047A
KR20060132046A
KR20050018976A
KR20050018975A
KR20030042019A
KR20010024761A
KR100793527B1
KR100793526B1
KR100792985B1
KR100752909B1
KR100736317B1
KR100721481B1
KR100709661B1
KR100695858B1
KR100695857B1
KR100403719B1
TW200621966A
TW200300025A
TW1272300B
TW577913B
SG128425A1

Anmelder: ASHIZAWA TORANOSUKE
           HITACHI CHEMICAL CO LTD
           KURATA YASUSHI
           MATSUZAWA JUN
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           TANNO KIYOHITO
           TERASAKI HIROKI
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           TANNO YOSHIDA MASATO ASHISAWA
           TERASAKI HIROKI
           TERAZAKI HIROKI
           TORANOSUKE ASHISAWA
           TORANOSUKE ASHISAWA
           YASUSHI KURATA
           YUUTO OOTUKI
Zusammenfassung:

Source: US6343976 BA [EN] To polish polishing target surfaces of SiO 2 insulating films or the like at a high rate without scratching the surface, the present invention provides an abrasive comprising a slurry comprising a medium and dispersed therein at least one of i) cerium oxide particles constituted of at least two crystallites and having crystal grain boundaries or having a bulk density of not higher than 6.5 g/cm 3 and ii) abrasive grains having pores. Also provided are a method of polishing a target member and a process for producing a semiconductor device which make use of this abrasive
POLISHING PAD AND METHOD FOR MANUFACTURING POLISHING PADS

Source: US2007049164 AA [EN] A polishing pad comprising particles having an average diameter between 1 nanometer and 100 nanometers, wherein the total weight of the particles is greater than about 3 percent of the total weight of the pad. Also, a method of manufacturing a polishing pad comprises the steps of: mixing a pre-polymer and abrasive particles together; wherein the abrasive particles have an average diameter of between 1 nanometer and 100 nanometers in diameter, and wherein the abrasive particles comprise more than about 3 percent by weight of the polishing pad; mixing a curative with the mixed pre-polymer and particles; and pouring the mixture of pre-polymer, particles and curative into a mold. In one exemplary embodiment the particles are silica and the pre-polymer is a polyurethane pre-polymer
Source: US6685539 BA [EN] A processing tool is used to carry out a fixed-abrasive grinding process on a surface of a silicon work-piece. The processing tool includes abrasive grains made up silica grains. A primary average grain size of the silica grains is desirably 0.8 nm to 10 and mum.
Source: US2009150514 AA [EN] The disclosure describes systems and methods delivering communications based on contextual addresses. An address string containing two or more identifiers, which may not be unique identifiers, and at least one conditional operator are provided as the address for a message or communication. The system identifies contextual relationships between a plurality of entities based on prior communications between the entities over the network. Based the contextual relationships, each identifier in the address string is disambiguated to identify one of the entities as a recipient and any associated delivery conditions controlling the delivery of the communication. The communication is then delivered to the identified recipient in accordance with the delivery condition.
Source: US2014187123 AA [EN] An abrasive article configured to grind a workpiece having a fracture toughness of less than about 6 MPa·m ½ includes a body comprising abrasive particles contained within a bond material comprising a metal, wherein the body comprises a ratio of VAG/VBM of at least about 1.3, wherein VAG is a volume percent of abrasive particles within a total volume of the body and VBM is a volume percent of bond material within the total volume of the body, and wherein the abrasive particles have an average particle size of 1 to 45 microns.
Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 70
Source: US2014187124 AA [EN] An abrasive article configured to grind a workpiece having a fracture toughness at least about 7 MPa·m0.5 includes a body comprising abrasive particles contained within a bond material comprising a metal, wherein the body comprises a ratio of VAG/VBM of at least about 1.3, wherein VAG is a volume percent of abrasive particles within a total volume of the body and VBM is a volume percent of bond material within the total volume of the body, and wherein the abrasive particles have an average particle size of 40 to 60 microns.
Source: US2007178817 AA [EN] Discontinuous abrasive particle releasing surfaces are disclosed that may be employed in low speed wet grinding, sanding, and polishing operations. The discontinuous abrasive surfaces of the present invention may consist of abrasive containing protrusions attached to rigid or flexible surfaces or alternatively may be comprised of closed cell foam compositions impregnated with abrasive materials such as aluminum oxide. The voids present in the discontinuous abrasive surfaces of the present invention serve to hold water and remove debris. The resulting discontinuous abrasive particle releasing surfaces are long lasting and may be made low in cost.
Source: US2010000159 AA [EN] A bond matrix for metal bonded abrasive tools includes a metal bond system, porosity and an optional filler. Tools according to embodiments of the invention exhibit long tool life, produce an acceptable quality of cut and can have self-dressing properties. The bond matrix can be used, for example, in abrasive tools configured for the electronics industry, such as 1A8 wheels for slicing ball grid arrays (BGAs) and other such slicing operations.
Titel: BONDED ABRASIVE ARTICLES, METHOD OF FORMING SUCH ARTICLES, AND GRINDING PERFORMANCE OF SUCH ARTICLES

Patentnummer: WO2012031251A3

Anmeldung: WO2011US50412
EP20110822752
US20110225130
JP20130527353T
CA20112809450
CN201180042442
KR20137007295
TW20110131579
AR2011P103211
IL20110224906
IN2013DN02287

Priorität: US20100379923P 20100903
US20110225130 20110902
WO2011US50412 20110902

Patentfamilie: WO2012031251A3
WO2012031251A2
EP2611574A4
EP2611574A2
US2012066982A1
JP2013536765T2
CA2809450A
CN103079765A
KR20130062998A
TW201223699A
AR083734AA
IL224906A0
IN02287DN2013A

Anmelder: RAMANATH SRINIVASAN
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SAINT GOBAIN ABRASIVES INC
SAUCIER KENNETH A
UPADHYAY RACHANA

Erfinder: RAMANATH SRINIVASAN
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IPC-Notationen: B24B0001-00
B24B0037-00
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B24D0003-02
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B24D0003-14
B24D0003-34
B24D0018-00
C01B0031-34
C01B0032-949
C09C0001-68
C09K0003-14

CPC-Notationen: B24B0001-00
B24D0003-02
B24D0003-06
B24D0003-14
B24D0003-34
C09K0003-14
Zusammenfassung:

Source: US2012066982 AA [EN] An abrasive tool having a bonded abrasive body including abrasive grains contained within a bond material comprising a metal. During a grinding operation, the bonded abrasive body has a power variance (Po-Pn)/Po x100 percent of not greater than about 40 percent, wherein Po represents the grinding power to grind a workpiece with the bonded abrasive body at an initial grinding cycle and Pn represents the grinding power to grind the workpiece for a nth grinding cycle, wherein n>4

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 74
Zusammenfassung:
Source: US2008148651 AA [EN] The disclosure relates to fixed abrasive articles having a plurality of three-dimensional abrasive composites including abrasive particles dispersed in a matrix material including a polymeric binder and a plurality of nanoparticulate inorganic filler particles having a volume mean diameter no greater than 1000 nanometers (nm). In some embodiments, the volume mean diameter of the abrasive particles is less than 500 nm, and the volume mean diameter of the inorganic filler particles is no greater than 200 nm. In other embodiments using non-ceria abrasive particles, the ratio of the amount of matrix material to the amount of non-ceria abrasive particles on a volumetric basis is at least 2. In alternate embodiments using non-ceria abrasive particles, the ratio of the amount of non-ceria abrasive particles to the amount of inorganic filler particles on a volumetric basis is no greater than 3. Also provided are methods of making and using fixed abrasive articles according to the disclosure.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 75
Patentfamilie: WO2005039827A1
EP1677949B1
EP1677949A1
DE602004038673D1
US8337574B2
US7195658B2
US2009199487A1
US2007173180A1
US2007169420A1
US2006260208A1
US2005085167A1
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AR067235AB
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HK1093177A1
IL174976A1
IL174976A0
IL219406A0
IN235461B
IN00424MN2006A
MY147416A
NO20062159L
NO327826B1
NO20062159A
NZ546674A
PL1677949T3
PT1677949T
RU2318649C1
RU2006112606A
SG148182A1
TH73666A
UA88774C2
ZA200603028A

Anmelder: NEVORET DAMIEN C
SAINT GOBAIN ABRASIVES INC
SAINT GOBAIN ABRASVIES INC
SAINT GOBAIN SA
SWEI GWO S
YANG PATRICK
Zusammenfassung:

Source: US2005085167 AA [EN] An antiloading composition includes a first organic compound. The compound has a water contact angle criterion that is less than a water contact angle for zinc stearate. The first compound also satisfies at least one condition selected from the group consisting of a melting point $T_{\text{melt}}$ greater than about 40 degrees C, a coefficient of friction $F$ less than about 0.3, and an antiloading criterion $P$ greater than about 0.3. Another embodiment includes a second organic compound, having a different water contact angle from that of the first organic compound. The composition has a particular water contact angle $W$ degrees $\theta$ that is determined, at least in part, by the independent $W$ degrees $\theta$ of each compound and the proportion of each compound in the composition. Also, an abrasive product includes the antiloading composition. A method of grinding a substrate is disclosed that includes employing effective amount of an antiloading composition. Further disclosed is a method of selecting an antiloading compound.
Source: US2016184976 AA [EN] An abrasive tool can include a bonded abrasive including a body and a barrier layer bonded to a major surface of the body. The body can include abrasive particles contained within a bond material. The barrier material can include a metal-containing film. In an embodiment, the barrier layer may further include a polymer-containing film. In another embodiment, the barrier layer may include a biaxially oriented material. The abrasive tool may be formed such that the barrier layer is formed in-situ with the formation of the bonded abrasive.
Title: ABRASIVE ARTICLES AND METHODS FOR MAKING SAME

Patentnumber: WO2009076255A3

Anmeldung: WO2008US85786
             EP20080859537
             DE200860034032T
             US20080329658

Priorität: US20070992923P 20071206
             EP20080859537 20081208
             US20080329658 20081208
             WO2008US85786 20081208

Patentfamilie: WO2009076255A3
               WO2009076255A2
               EP2231365B1
               EP2231365A4
               EP2231365A2
               DE602008034032D1
               US8449635B2
               US2009145044A1

Anmelder: SAINT GOBAIN ABRASIFS SA
           SAINT GOBAIN ABRASIVES INC
           YOU XIAORONG

Erfinder: YOU XIAORONG

IPC-Notationen: B24B0001-00
                B24D0003-00
                B24D0003-02
                B24D0003-34
                B24D0011-00
                C09C0001-68
                C09C0003-14
                C09C0249-00
                C09C0251-00
                C09K0003-14
                G03C0001-00

CPC-Notationen: B24D0003-34
                B24D0011-00
                B24D0011-001
                C09K0003-1409

Zusammenfassung:

Source: US2009145044 AA [EN] The disclosure is directed to an abrasive article. The abrasive article includes a backing having a major surface and a make layer. The make layer is disposed over the major surface of the backing. The make layer includes abrasive grains and a photoinitiator that increases the depth of ultraviolet cure of the make layer by at least about 50 percent compared to bis (2,4,6-trimethyl benzoyl) phenyl phosphine oxide. The disclosure is also directed to a method for forming the abrasive article.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 78
Titel: CUBIC BORON NITRIDE GRINDING WHEEL
Patentnummer: EP2433749B1
Anmeldung: EP20110180246
DE201160020741T
US20110217432
JP20100214774
CN201110293683
Priorität: JP20100214774 20100927
EP20110180246 20110906
Patentfamilie: EP2433749B1
EP2433749A3
EP2433749A2
DE602011020741D1
US9149912B2
US2012073211A1
JP2012066365A2
JP5764893B2
CN102416602A
CN102416602B
Anmelder: JTEKT CORP
ONO NAOTO
SOMA SHINJI
YAMASHITA TOMOKAZU
Erfinder: ONO NAOTO
SOMA SHINJI
YAMASHITA TOMOKAZU
IPC-Notationen: B24B0001-00
B24D0003-00
B24D0003-04
B24D0003-14
B24D0003-18
B24D0003-34
B24D0005-00
B24D0011-00
B24D0018-00
CPC-Notationen: B24D0003-14
B24D0003-342
B24D0005-00
Zusammenfassung:
Source: US2012073211 AA [EN] It is an object of the present invention to provide a cubic boron nitride grinding wheel especially suitable for a rough grinding. A CBN grinding particle included in a CBN grinding wheel has a single crystal CBN grinding particle having a tetrahedron construction and a multi crystal CBN grinding particle. The single crystal CBN grinding particle is blended with a ratio of equal to or more than 50 percent to a total summed volume of the single and multi CBN grinding particles
Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 79
Title: BONDED ABRASIVE ARTICLE AND METHOD OF GRINDING

Patentnummer: WO2014106159A1

Anmeldung: WO2013US78231
US20150819670
US20130143306

Priorität: US20120748006P 20121231
US20130143306 20131230
US20150819670 20150806

Patentfamilie: WO2014106159A1
US9102039B2
US10377016B2
US2015336240A1
US2014187125A1

Anmelder: SAINT GOBAIN ABRASIFS SA
SAINT GOBAIN ABRASIVES INC

Erfinder: JACOB MATTHEW F
LAMOUREUX MARC A
RAMANATH SRINIVASAN
SALES LENNY C
SAUCIER KENNETH A
UPADHYAY RACHANA
WANG CONG

IPC-Notationen: B24B0001-00
B24D0003-00
B24D0003-06
B24D0003-20
B24D0007-02

CPC-Notationen: B24D0003-008
B24D0003-06
B24D0003-008

Zusammenfassung:
Source: US2014187125 AA [EN] An abrasive article comprising: a first body comprising a first bond material having abrasive particles contained within the first bond material, wherein the first body comprising the first bond material comprises a ratio of VAG (1) /VBM (1) of at least about 1.3; a second body comprising a second bond material having abrasive particles contained within the second bond material, wherein the second body comprising the second bond material comprises a ratio of VAG (2) /VBM (2) of less than about 1.3, and wherein VAG is a volume percent of abrasive particles within a total volume of the first or second body respectively and VBM is a volume percent of the first or second bond material within the total volume of the first or second body respectively

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 80
Title: DRY GRINDING CEMENTED CARBIDE WORKPIECES WITH SILVER-COATED DIAMOND GRIT

Patentnummer: EP0065690B1

Anmeldung: EP19820104040
DE19823274075T
JP19820082969
CA19820400758
AU19820083701
AT19820104040T
BR1982002886
ES19820512201
IE1982001177
IL19820065701
ZA19820003067

Priorität: US19810264765 19810518
CA19820400758 19820408
EP19820104040 19820510

Patentfamilie: EP0065690B1
EP0065690A1
DE3274075D1
JP57201173A2
CA1194318A1
AU198283701A1
AT23286E
BR8202886A
ES8304836A1
ES512201A0
IE821177L
IE52990B
IL65701A1
IL65701A0
ZA8203067A

Anmelder: GEN ELECTRIC

Erfinder: EDOUIN ARUBAATO PASUKOO
PASCOE EDWIN ALBERT
RUARK WILLIAM WEBSTER
UIRIAMU UEBUSUTAA RAAKU

IPC-Notationen: B24B0001-00
B24D0003-00
B24D0003-20
B24D0003-28
C09K0003-14

CPC-Notationen: C09K0003-1445

Zusammenfassung:

Source: EP0065690 A1 [EN] Disclosed is an improved method for dry grinding a workpiece comprising a non-ferrous metal carbide-containing alloy with a resin bonded grinding element having diamond particles embedded in the grinding surface thereof. Such improvement for increasing the grinding ratio and decreasing the power required to rotate the grinding element during grinding operations comprises coating the exterior surfaces of each said diamond particle with a layer of metal consisting essentially of silver prior to embedding the diamond particles in the grinding element.
Zusammenfassung:

Source: US2011065362 AA [EN] A structured abrasive article includes a backing having a structured abrasive layer disposed on and secured thereto. The structured abrasive layer includes shaped abrasive composites that comprise abrasive particles and nonionic polyether surfactant dispersed in a crosslinked polymeric binder. The abrasive particles have a mean particle size of less than 10 micrometers. The nonionic polyether surfactant is not covalently bound to the crosslinked polymeric binder and is present in an amount of from 2.5 to 3.2 percent by weight based on a total weight of the shaped abrasive composites. The structured abrasive articles are useful for abrading a workpiece.
Title: COATED ABRASIVE ARTICLES AND METHODS OF MAKING AND USING THE SAME

Patentnummer: WO2010002493A8

Anmeldung: WO2009US42208
EP20090773945
DE200960008897T
US20080177496
JP20110516361T
CN200980131956

Priorität: US20080164355 20080630
US20080177496 20080722
EP20090773945 20090430
WO2009US42208 20090430

Patentfamilie: WO2010002493A8
WO2010002493A1
EP2303980B1
EP2303980A1
DE602009008897D1
US2009325466A1
JP5572159B2
JP2011526842T2
CN102124070A
CN102124070B

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: KINCAID DON H
THURBER ERNEST L

IPC-Notationen: B24B0001-00
B24D0003-20
B24D0011-00
C08J0005-14
C09K0003-14
F16D0069-02

CPC-Notationen: B24D0003-20

Zusammenfassung:
Source: US2009325466 AA [EN] A coated abrasive article comprises a backing, optionally having at least one of a presize layer, a saturant, and a backsize layer thereon; and an abrasive layer adjacent and secured to the fabric backing. The abrasive layer may comprise a make layer, a size layer, and abrasive particles, or the abrasive particles may be dispersed in a binder. At least one of the make layer or presize layer comprises a reaction product of a binder precursor comprising from 45 to 75 percent by weight of resole phenolic resin, from 5 to 40 percent by weight of polyepoxide, from 1 to 20 percent by weight of polyfunctional (meth)acrylate, and an effective amount of photoinitiator to free radically B-stage the binder precursor. Methods of making and using the coated abrasive article are also disclosed.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 83
### Titel:
Alumina bonded abrasive for cast iron

### Patentnummer:
US5139539A

### Anmeldung:
US19910780417  
US19900547636  
US19890392825  
US19880245589  
US19840666131

### Priorität:
US19810331442 19811215  
US19830536830 19830930  
US19840615663 19840531  
US19840666131 19841030  
US19880245589 19880919  
US19890392825 19890727  
US19900547636 19900702  
US19900547823 19900702  
US19910780417 19911022

### Patentfamilie:
US5139539A  
US5139536A  
US4988370A  
US4883501A  
US4800685A

### Anmelder:
3M CO  
MINNESOTA MINING AND MFG

### Erfinder:
HAYNES JR DOUGLAS G

### IPC-Notationen:
B24B0001-00  
B24D0003-34  
C04B0035-111  
C09K0003-14

### CPC-Notationen:
B24B0001-00  
B24D0003-346  
C04B0035-1115  
C09K0003-14

### Zusammenfassung:
Source: US4800685 A [EN] This invention concerns the discovery that sol-gel process alumina abrasive grain provides superior performance in bonded abrasives for grinding cast iron. In a preferred form it is disclosed that bonded abrasives of sol-gel process alumina abrasives in combination with other abrasive grains such as those of silicon carbide and fused alumina also provide superior grinding of cast iron.

### Datum des Suchlaufs:
07.04.2021

### Dokument Nr.:
84
Zusammenfassung:
Source: US4671021 A [EN] A grinding tool has diamond superabrasive grains as the abrasive and a bond to retain the abrasive grains. The bond is made of organic polymer or metal and contains as a filler both a solid film-forming lubricant and finely divided diamond superabrasive grains having a grain size smaller than one-third that of the diamond superabrasive grains as the abrasive. The grinding tool of this invention is suitable for grinding a hard cutting material such as cutting tools made of titanium nitride cermet and exhibits outstanding cutting performance and durability.
Title: **Grinding** body for polishing surfaces

**Patentnummer:** DE19736504C2

**Anmeldung:** DE19971036504

**Priorität:** DE19971036504 19970822

**Patentfamilie:** DE19736504C2
DE19736504A1

**Anmelder:** IPACH AND T GMBH

**Erfinder:** GLIENKE PETER O

**IPC-Notationen:** B24B0003-00
B24B0003-34

**CPC-Notationen:** B24B0003-34

**Zusammenfassung:**

Source: DE19736504 A1 [EN] The grinding body (1) has a grinding agent (3) such as fine-grained hard sandstone, quartz particles etc., and a binding agent as well as an additive (4) having a cellular and/or pore structure to hold fluid substances which improve the polishing action. The additives can be polymer granulate or expanded perlite. The additive can contain a fluid anhydrous surfactant mixture.
Titel: COMPOSITE ABRASIVE ARTICLE
Patentnummer: US2557047A
Anmeldung: US19470750650
Priorität: US19470750650 19470527
Patentfamilie: US2557047A
Anmelder: CARBORUNDUM CO
Erfinder: GOEPFERT GEORGE J
HOWARD ELMER E

IPC-Notationen: B24B0003-00
                B24B0003-48
                B24D0003-02
                B24D0003-34
                B24D0005-00
                B24D0005-16
                B24D0007-00
                B24D0007-16
                B28D0001-02
                B28D0001-12

CPC-Notationen: B24D0003-02
                B24D0003-34
                B24D0005-16
                B24D0007-16
                B28D0001-12

Zusammenfassung:
Source: US2557047 A [EN] (Claim 1) 1,1.. An. article as claimed_ iti claim 10-
wherein the: glycol_ ester- is

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 87
Zusammenfassung:

Source: US2020198084 AA [EN] A grinding wheel includes a plurality of wheel tips. The plurality of wheel tips include a plurality of diamond abrasive grains and a bonding material mixed with the diamond abrasive grains. The plurality of diamond abrasive grains have a ratio of a length in a long axis direction to a width in a short axis direction of 1:2.5 to 1:3.5 and includes edges or vertices having a grinding angle of 90 degrees or less.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 88
Zusammenfassung:
Source: US2006016128 AA [EN] To determine what fine structure of the surface on which antiloading agents are applied performs the function of antiloading agents sufficiently. An abrasive material having an antiloading coating on an outermost surface thereof, in which the antiloading coating contains an antiloading agent and a binding resin, the binding resin is formed into a film with cracks, and a reticulate fine structure is formed on an entire surface of the antiloading coating by the cracks.
Titel: METHOD FOR GRINDING GLASS

Patentnummer: WO200064630A1

Anmeldung: WO2000US10747
EP20000928264
JP20110123048
JP20000613610T
JP20000613610
AU20000046524D
AU20000046524
KR20067017898
KR20017013575

Priorität: US19990130797P 19990423
JP20000613610 20000420
WO2000US10747 20000420

Patentfamilie: WO200064630A1
EP1175279A1
JP2011224773A2
JP4808848B2
JP2002542055T2
AU200046524A5
AU200046524A1
KR20060101791A
KR20010113890A

Anmelder: 3M CO MINNESOTA MINING AND MFG COMPANY
3M INNOVATIVE PROPERTIES CO
THREE M INNOVATIVE PROPERTIES CO

Erfinder: WOO EDWARD J

IPC-Notationen: B24B0005-00
B24B0005-01
B24B0007-20
B24B0007-24
B24B0009-08
B24D0003-00
B24D0003-02
B24D0003-20
B24D0003-28
B24D0003-34
B24D0007-00
B24D0007-06

CPC-Notationen: B24B0007-241
B24B0007-28
B24D0003-344
B24D0007-06

Zusammenfassung:

Source: WO0064630 A1 [EN] A method of grinding a surface of a glass workpiece is reported which includes (a) contacting a grinding layer of an abrasive article (10) with the surface of the glass workpiece, the grinding layer comprising a plurality of abrasive composites (11), the composites (11) comprising an organic resin, a metal salt selected from alkali metal salts, alkaline metal salts and combinations thereof, and single diamond abrasive particles dispersed homogeneously throughout said abrasive composites (11); (b) introducing a lubricant between the grinding layer of the abrasive article (10) and the surface of the glass workpiece; and (c) moving the grinding layer of the abrasive article (10) and the surface of the glass workpiece relative to one another.
Titel: RESIN BONDED GRINDING WHEEL

Patentnummer: WO2012145284A3

Anmeldung: WO2012US33880
EP20120774388
US20120111280
CA20122833342
CN201280018778
BR20131126817
RU20130146357

Priorität: US20110476428P 20110418
US20120111280 20120417
WO2012US33880 20120417

Patentfamilie: WO2012145284A3
WO2012145284A2
EP2699387A4
EP2699387A2
US2014057534A1
CA2833342C
CA2833342A
CN103492126A
CN103492126B
BR112013026817A2
RU2567165C2
RU2013146357A

Anmelder: 3M INNOVATIVE PROPERTIES CO
HAJDUK JANUSZ
MCARDLE JAMES L

Erfinder: HAJDUK JANUSZ
KHAJDUK JANUSH
MCARDLE JAMES L
MKARDLE DZHEJMS L

IPC-Notationen: B24B0005-22
B24D0003-10
B24D0003-20
B24D0003-28
B24D0003-34
B24D0011-04

Zusammenfassung:
Source: US2014057534 AA [EN] A resin bonded grinding wheel suitable for grinding polycrystalline diamond compacts is disclosed. The resin bonded grinding wheel uses a high concentration of diamonds based on a volume percent along with a mixture of hard and soft filler particles to effectively grind the polycrystalline diamond compacts while eliminating or reducing the need to continuously dress the outer surface of the resin bonded grinding wheel.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 91
Source: WO11080328 A2 [EN] The invention relates to a roughing and/or cut-off wheel for machining workpieces and/or separating workpieces, wherein the roughing and/or cut-off wheel (1) has a hardened body (2), wherein the hardened body (2) has at least a granular grinding medium (8), filler (9) and polymer as the binding agent matrix, wherein the filler (9) comprises expanded graphite and/or graphene.
Titel: IMPROVEMENTS IN OR RELATING TO RESIN-BONDED ARTICLES

Patentnummer: GB1211752A

Anmeldung: GB19680040973
19680829
NL19680012245

Priorität: US19670664181 19670829

Patentfamilie: GB1211752A
FR1582671A
BE720137A
NL6812245A

Anmelder: ENGELHARD HANOVIA INC

Erfinder:

IPC-Notationen: B24B0007-20
B24B0007-24
B24D0003-34

CPC-Notationen: B24B0007-24
B24B0007-241
B24D0003-344

Zusammenfassung:


Hard materials are surfaced with a resinbonded abrasive article comprising a substantially homogeneous mixture of abrasive particles of particle size of 5-200 microns and a particulate filler bonded by resinous material, the article having agglomerates of additional abrasive particles dispersed at random therethrough, the additional abrasive particles having a particle size of less than 5 microns. In the Figure glass sheets 10 suitably mounted in a conventional conveying means, e.g. embedded in plaster of Paris, are passed through the successive grinding and polishing stages I, II, III. Grinding wheels 12-15 remove progressively decreasing predetermined amounts of surface material. The sheets then pass to a satellite spider wheel 16 comprising diamond particles in a metal bond and then to a similar wheel 17 of abrasive articles of the invention. The sheets then pass to conventional garnet or iron oxide polishing stations 19-21.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 93
**Titel:** ANNULAR GRINDSTONE  
**Patentnummer:** [DE102019204461A1](https://www.dpatrient.de/)  
**Anmeldung:** DE201910204461  
US20190360681  
JP20180065229  
CN201910211293  
KR20190028058  
TW20190110551  
SG20191002228  
**Priorität:** JP20180065229 20180329  
KR20190028058 20190312  
**Anmelder:** DISCO ABRASIVE SYSTEMS LTD  
DISCO CORP  
**Erfinder:** AIKAWA HIROKI  
**IPC-Notationen:**  
B24B0007-22  
B24B0027-06  
B24B0041-04  
B24B0055-00  
**B24D0003-06**  
B24D0003-08  
**B24D0003-34**  
B24D0005-12  
B24D0007-06  
B24D0018-00  
B26D0001-00  
B26D0005-02  
C03B0033-023  
C22C0019-03  
C22C0038-00  
H01L0021-301  
H01L0021-67  
**CPC-Notationen:**  
B24B0007-22  
B24B0027-0683  
B24B0041-04  
**B24D0003-06**  
B24D0005-12  
B24D0007-066  
B24D0018-0018  
B26D0001-0006  
B26D2001-0053  
H01L0021-67092  
**Zusammenfassung:**  
Source: US2019299366 AA [EN] An annular grindstone includes a grindstone portion including a binding material, and abrasive grains which are dispersed into the binding material to be fixed, in which the binding material contains a nickel-iron alloy. Preferably, a contained ratio of iron in the nickel-iron alloy is in a range of 5 wt percent or more to less than 60 wt percent. More preferably, a contained ratio of iron in the nickel-iron alloy is in a range of 20 wt percent or more to 50 wt percent or less. Preferably, the annular grindstone includes the grindstone portion only. In addition, the annular grindstone further includes an annular base including a grip portion, in which the grindstone portion is exposed at an outer peripheral edge of the annular base.
Fixed Abrasive Three-Dimensional Lapping and Polishing Plate and Methods of Making and Using the Same

Source: US2019255676 AA [EN] A fixed abrasive three-dimensional plate includes micron size diamond beads or a mixture of abrasive particles and metal oxide beads, ranging in size from a few microns to a few tens of microns, incorporated into a matrix of one or more inorganic binders and fillers. The composition is formed into a rigid plate blank, and the abrasive plate is mounted on a substrate forming a lapping/polishing plate. The abrasive plate is capable of delivering high material removal rates coupled with reduced surface roughness when lapping/polishing advanced materials, including sapphire, titanium carbide reinforced alumina, silicon carbide, gallium nitride, aluminum nitride, zinc selenide, and other compound semiconductor materials, as well as, glass, ceramic, metallic, and composite workpieces. The diamond beads incorporated in the fixed abrasive three-dimensional plate include diamond particles ranging in size from a few nanometers to a few tens of microns, bonded with one or more inorganic binders and additives.
Zusammenfassung:
Source: US2002077037 AA [EN] Described are fixed abrasive articles including wear indicators
Title: EDGE FINISHING APPARATUS AND METHODS FOR LAMINATE PRODUCTION

Patentnummer: WO2017139608A1

Anmeldung: WO2017US17413
EP20170706936
DE201760013264T
US20170427484
JP20180541395T
CN201780011143
KR20187025775

Priorität: US20160294146P 20160211
US20170427484 20170208
EP20170706936 20170210
WO2017US17413 20170210

Patentfamilie: WO2017139608A1
EP3414053B1
EP3414053A1
DE602017013264D1
US2017232571A1
JP2019504775T2
CN108770349A
KR20180108804A

Anmelder: CORNING CO LTD
CORNING INC

Erfinder: BANKAITIS JONAS
HUZINEC GARY MICHAEL

IPC-Notationen: B24B0009-10
B24D0003-00
B24D0003-06
B24D0005-02
B24D0005-14

CPC-Notationen: B24B0009-10
B24B0009-102
B24D0003-06
B24D0003-06
B24D0005-02
B24D0005-02
B24D0005-14
B24D0005-14

Zusammenfassung:
Source: US2017232571 A [EN] Embodiments of a grinding wheel and methods for edge finishing glass substrates are disclosed. In one or more embodiments, the grinding wheel includes a metal matrix structure, a plurality of primary abrasive particles and a plurality of secondary abrasive particles bonded to the matrix structure, wherein one of the primary abrasive diamond particles and secondary abrasive particles comprises resin bond diamond particles. In some embodiments, the other of the primary abrasive diamond particles and secondary abrasive particles comprises metal bond diamond particles.
Title: ABRASIVE ARTICLES WITH RESIN CONTROL ADDITIVES

Patentnummer: WO2004022285A1

Anmeldung: WO2003US22681
EP20030748959
DE20036041159
US20020236588
JP20040534249T
AU2003268008
CN20038021127
KR20057003761
TW20030120992
BR2003PI14002
MX2005PA02356
TH20031002892

Priorität: US20020236588 20020906
EP20030748959 20030721
WO2003US22681 20030721

Patentfamilie: WO2004022285A1
EP1534468B1
EP1534468A1
DE60341159D1
US6858292B2
US2004048057A1
JP2005537941T2
AU2003268008A1
CN1678431A
KR20050057177A
KR10102138981
TW200413132A
TW291910B
BRPI0314002A
MXPA05002356A1
TH64895A

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: PHILIP EDWARD KENDALL

IPC-Notationen: B24B0019-00
B24D0003-00
B24D0003-02
B24D0003-34
B24D0011-00
B32B0005-16
G02B0006-00

CPC-Notationen: B24B0011-00
B24D0003-002
B24D0003-344
B24D0011-00
Y10T0428-25
Y10T0428-252
Y10T0428-254
Y10T0428-256
Y10T0428-258
Y10T0428-259
Zusammenfassung:

Source: US2004048057 AA [EN] The present invention is directed to abrasive articles comprising a resin transfer additive and methods of abrading a workpiece with the abrasive article. The resin control additive is a metal salt of a long chain fatty acid. The abrasive article comprises a backing having a major surface, and an abrasive layer secured to at least a portion of the major surface. The abrasive layer comprises a binder, abrasive particles distributed in the binder, and a resin control additive distributed in the binder, and wherein the abrasive layer has a substantially uniform thickness.
Titel: Abrasive member for very high return loss optical connector ferrules

Patentnummer: US6012969A
Anmeldung: US19960744321 JP19950302676
Priorität: JP19950302676 19951121
Patentfamilie: US6012969A JP9141547A2
Anmelder: FUJI PHOTO FILM CO LTD
Erfinder: FUJIYAMA MASAAKI ISHIGURO TADASHI RYOKE KATSUMI RYOMO KATSUMI


Zusammenfassung:
Source: US6012969 A [EN] An abrasive member for a very high return loss optical connector ferrule is used in abrading an end of an optical connector ferrule having a ferrule hole, in which an optical fiber has been inserted and secured, into a convex spherical surface. The abrasive member comprises a flexible substrate and an abrasive layer, which is formed on the surface of the flexible substrate and comprises a binder and abrasive grains. The surface roughness Ra, expressed in terms of arithmetic mean deviation, of the abrasive layer falls within the range of 0.01 μm to 0.05 μm. The abrasive member carries out polishing such that the surface smoothness of the ferrule surface and the optical fiber surface may be kept high, such that a difference in level between the ferrule surface and the optical fiber surface may not occur, and such that the very high return loss characteristics may thereby be obtained.
Titel: ABRASIVE TAPE
Patentnummer: US4922675A
Anmeldung: US19890337778
JP19880090951
Priorität: JP19880090951 19880413
Anmelder: FUJI PHOTO FILM CO LTD
Erfinder: FUJIYAMA MASAAKI
IWASAKI TAKASHI
KOSHA HIDEAKI
SATOSHI MASAMI
SUZUKI MASAMI
YONEYAMA TAKASHI
Anmelder: FUJI PHOTO FILM CO LTD
Erfinder: FUJIYAMA MASAAKI
IWASAKI TAKASHI
KOSHA HIDEAKI
SATOSHI MASAMI
SUZUKI MASAMI
YONEYAMA TAKASHI
IPC-Notationen: B24B0201-00
B24B0201-16
B24D0003-00
B24D0003-20
B24D0003-28
B24D0003-34
B24D0011-00
G11B0005-127
G11B0005-187
CPC-Notationen: B24B0201-16
B24D0003-004
B24D0003-28
B24D0003-346
B24D0011-00
G11B0005-1871
Y10T0428-24983
Y10T0428-259
Zusammenfassung:
Source: US4922675 A [EN] An abrasive tape comprises a flexible substrate and an abrasive layer which is overlaid on the flexible substrate and which contains abrasive grains and a binder. The abrasive grains comprise first abrasive grains, which have a mean grain diameter within the range of 0.07 $\mu$m to 0.40 $\mu$m and a Mohs hardness within the range of 5 to 7, and second abrasive grains, which have a mean grain diameter within the range of 0.20 $\mu$m to 0.60 $\mu$m and a Mohs hardness not lower than 8.5
Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 100
Titel: METHOD OF ABRADING A METAL WORKPIECE

Patentnummer: WO2008082880A1

Anmeldung: WO2007US87194
US20070746923

Priorität: US20060882941P 20061231
US20070746923 20070510

Patentfamilie: WO2008082880A1
US2008155904A1

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: CULLER SCOTT R
MEWES DEAN H
MOREN LOUIS S
PETERSON SCOTT W
WELYGAN DENNIS G

IPC-Notationen: B24B0021-00
B24D0003-34
B24D0011-00

CPC-Notationen: B24B0001-00
B24B0055-02
B24D0011-00

Zusammenfassung:

Source: US2008155904 AA [EN] A method of abrading a metal workpiece including contacting a metal workpiece with an abrasive article, wherein the abrasive article includes a flexible waterproof backing having a first surface bearing a cured primer coating; and a plurality of shaped structures, each structure having a distal end spaced from said backing and an attachment end attached to the primer coating on the backing, said shaped structures including a mixture of abrasive particles and cured particulate binder, wherein the metal workpiece is contacted with the distal ends of the shaped structures to form an abrading interface; moving the abrasive article relative to the metal workpiece while providing sufficient force between the metal workpiece and the distal ends of the shaped structures of the abrasive article to abrade the metal workpiece; and applying liquid coolant proximate the abrading interface.
Titel: **GRINDING DISK HAVING PLANT SEED CAPSULES AS A FILLER AND METHOD FOR THE PRODUCTION THEREOF**


Anmeldung:
- [DE201050004595T](https://patents.google.com/patent/DE201050004595T)
- [DE200910006699](https://patents.google.com/patent/DE200910006699)
- [US20100146670](https://patents.google.com/patent/US20100146670)
- [JP20110546841T](https://patents.google.com/patent/JP20110546841T)
- [CN201080006095](https://patents.google.com/patent/CN201080006095)
- [BR20100107425](https://patents.google.com/patent/BR20100107425)
- [ES20100701675T](https://patents.google.com/patent/ES20100701675T)
- [HK20120104985](https://patents.google.com/patent/HK20120104985)
- [MX20110007914](https://patents.google.com/patent/MX20110007914)
- [PL20100701675T](https://patents.google.com/patent/PL20100701675T)

Priorität:
- [DE200910006699 20090129](https://patents.google.com/patent/DE200910006699)

Patentfamilie:
- [DE102009006699A1](https://patents.google.com/patent/DE102009006699A1)
- [DE502010004595D1](https://patents.google.com/patent/DE502010004595D1)
- [JP2012516241T2](https://patents.google.com/patent/JP2012516241T2)
- [CN102300675A](https://patents.google.com/patent/CN102300675A)
- [BRPI1007425A2](https://patents.google.com/patent/BRPI1007425A2)
- [ES2437392T3](https://patents.google.com/patent/ES2437392T3)
- [HK1164216A1](https://patents.google.com/patent/HK1164216A1)
- [MX2011007914A1](https://patents.google.com/patent/MX2011007914A1)
- [PL2391482T3](https://patents.google.com/patent/PL2391482T3)

Anmelder: KEULER JOSEF
- RHODIUS SCHLEIFWERKZEUGE GMBH AND CO KG
- STANG CHRISTIAN

Erfinder: KEULER JOSEF
- STANG CHRISTIAN

IPC-Notationen: B24B0027-00
- B24D
- B24D0003-00
- B24D0003-02
- B24D0003-04
- B24D0003-18
- B24D0003-20
- B24D0003-32
- B24D0003-34
- C07B0051-00
- C07D0309-18

CPC-Notationen: B24D0003-20
- B24D0003-32
- B24D0003-342
- B24D0003-348
Zusammenfassung:

Source: US2011281511 AA [EN] The invention relates to a synthetic-resin-bonded grinding disk comprising a mixture of abrasive grain, binding agent, and pore formers, wherein the pore formers are plant seeds and are contained in the finished grinding disk. The grinding disk is composed of 60 to 90 wt percent of abrasive grain and 10 to 40 wt percent of a binding agent, wherein the plant seeds constitute up to 80 wt percent of the binding agent. The plant seeds can contain oil and can be rape seeds, poppy seeds, clover seed, lupin seeds, mustard seeds, serradella vetch seeds, or similar plant seeds. The grinding disk can be produced by mixing abrasive grain, binding agent, and plant seeds, pouring the starting mixture into a mold provided therefor, pressing the mixture, pre-drying the mixture, and curing the grinding disk. The plant seeds are not burned in the production of the grinding disk. The grinding disk is cured at temperatures of up to 250 degrees centigrade, preferably of up to 200 degrees centigrade, more preferably of up to 180 degrees centigrade, and more preferably of up to 150 degrees centigrade.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 102
Source: US2019240812 AA [EN] An annular grindstone includes a grindstone portion in which abrasive grains are fixed with a bonding material containing nickel and has a through hole at the center thereof. The grindstone portion has a laminated structure of a total of three or more layers in which a first layer and a second layer having a porous structure are alternately laminated on top of another along a penetrating direction of the through hole and both of outermost layers in the laminated structure which are exposed outside are the first layers.
Titel: SURFACE-MODIFYING TOOLS
Patentnummer: WO9601721A1
Anmeldung: WO1995GB01614
             EP19950924432
             DE1995624876T
             US19970765559
             JP19960504190T
             GB19980009712
             GB19950014019
             GB19940014066
             AU19950028932
             IN1995DE01288
Priorität:  GB19940014066 19940712
             GB19950014019 19950710
             GB19980009712 19950710
             WO1995GB01614 19950710
Patentfamilie: WO9601721A1
              EP0769993B1
              EP0769993A1
              DE69524876T2
              DE69524876D1
              US5902360A
              JP1050343OT2
              GB2322312B2
              GB2293387B2
              GB2322312A1
              GB2293387A1
              GB9809712A0
              GB9514019A0
              GB9414066A0
              AU199528932A1
              IN01288DE1995A
Anmelder: BALL BURNISHING MACH TOOLS
          LINZELL GEOFFREY ROBERT
Erfinder: LINZELL GEOFFREY ROBERT
IPC-Notationen: B24B0029-00
                B24B0031-00
                B24B0031-116
                B24D0003-20
                B24D0003-34
CPC-Notationen: B24B0029-00
                B24B0031-116
                B24D0003-34
                B24D0003-34
                Y10T0428-31663
In a method for removing metal from the surface of a workpiece by continuously rubbing the surface with a tool in a friction-inducing manner and in the presence of a friction-enhancing agent (an anti-lubricant) and in which a thin layer of the friction-enhancer must be available at the tool surface, there is provided a tool which carries the friction-enhancing agent in the form of a composition of an abrasive and a rubbery solid siloxane reaction product admixed with a liquid, mobile, anti-lubricant siloxane stably dispersed therewithin, and the use of the tool to excorate and condition the surface by removing therefrom the oxide film thereon and leaving its place a siloxane film, and a conditioned metal surface having siloxane molecules each individually bonded directly to the metal over a relatively large area of the surface to provide a relatively uniform siloxane layer.
Titel: Lightweight, tough synthetic composite grindstone

Patentnummer: DE19703879A1
Anmeldung: DE19971003879
Priorität: DE19971003879 19970203
Patentfamilie: DE19703879A1
Anmelder: WALTHER CARL KURT GMBH
Erfinder: WALTHER HENNING D

IPC-Notationen: B24B0031-00
                B24B0031-14
                C08J0005-14

CPC-Notationen: B24B0031-14

Zusammenfassung:
Source: DE19703879 A1 [EN] The composite grindstone, comprises a bonded, granular grit (2). The novelty is incorporation of hollow (glass) microspheres (3) into the grindstone, up to the point of conferring buoyancy. These have walls (W) which are frangible during use. Preferably the composite contains 40-75 percent polyester resin (4), 10-30 percent grinding mineral (2) and 1-20 percent microspheres (3)
Titel: POLISHING TOOL AND MANUFACTURING METHOD THEREFOR

Patentnummer: EP1175965A3

Anmeldung: EP20010118039
US20010910907
JP20010224182
KR20010044866
TW20010118119

Priorität: JP20000224485 20000725
JP20010010830 20010118
JP20010125010 20010423
JP20010224182 20010725

Patentfamilie: EP1175965A3
EP1175965A2
US2002016139A1
JP2003011066A2
KR20020009510A
TW519506B

Anmelder: EBARA CORP
WADA YUTAKA

Erfinder: HIROKAWA KAZUTO
HIYAMA HIROKUNI
MATSUO HISANORI
MATSUO NAONORI
WADA TAKETAKA
WADA YUTAKA

IPC-Notationen: B24B0037-00
B24B0037-04
B24B0037-20
B24B0037-24
B24D0003-00
B24D0003-02
B24D0003-20
B24D0003-28
B24D0003-32
B24D0003-34
B24D0018-00
C08J0005-14
C09K0003-14
H01L0021-02
H01L0021-304
H01L0021-306

CPC-Notationen: B24B0037-24
B24D0003-32
H01L0021-30625
Zusammenfassung:

Source: US2002016139 AA [EN] A polishing tool applicable to various types of polishing objects is provided that enables to stabilize the polishing speed and to obtain superior surface details while reducing the formation of defects such as scratches on the polished surface. The tool is operated by pressing and sliding on the polishing object in a swinging motion and the surface is polished with abrasive particles imbedded in a matrix comprised primarily of a thermoplastic resin such as butadiene styrene, polybutadiene or MBS resin of acryl rubber group. The polishing tool includes fixed-abrasive polishing tool that contains abrasive particles within the polishing tool, or a polishing pad containing non-fixed-abrasive particles.
Titel: POLISHING METHOD

Anmeldung: EP20010128235
US20010995613
JP20000398807
JP20000395729
JP20000365620
KR20010074987
TW20010129565

Priorität: JP20000365620 20001130
JP20000395729 20001226
JP20000398807 20001227

Patentfamilie: EP1211024A3
EP1211024A2
US6777335B2
US2002098701A1
JP2002203818A2
JP2002198331A2
JP2002166356A2
KR20020042500A
KR100589070B1
TW558479B

Anmelder: JSR CORP

Erfinder: HASEGAWA KOU
HASEGAWA TORU

IPC-Notationen: B24B0037-00
B24B0037-04
B24B0037-20
B24B0037-24
B24D0003-20
B24D0003-34
C09K0003-14
H01L0021-02
H01L0021-304
H01L0021-306

CPC-Notationen: B24B0037-24
B24D0003-34

Zusammenfassung:

Source: US2002098701 AA [EN] It is an object of the present invention to provide a polishing method, with which a surface of high flatness can be obtained without fail at a high removal rate and in a stable manner. The polishing method is to polish a surface to be polished of an object to be polished by using a polishing pad while existing an aqueous chemical mechanical polishing solution containing an oxidizing agent such as hydrogen peroxide between polishing surface of the polishing pad equipped with a polishing part that contains abrasive, and the surface to be polished to be polished of the object to be polished. The aqueous chemical mechanical polishing solution may be contained a heterocyclic compound, a multivalent metal ion, an organic acid and the like. Also, the aqueous chemical mechanical solution may be contained no abrasive.
Zusammenfassung:
Source: US2004224622 AA [EN] There are provided a polishing pad which exhibits excellent polishing stability and excellent slurry retainability during polishing and even after dressing, can prevent a reduction in polishing rate effectively and is also excellent in an ability to flatten an substrate to be polished, and a method for producing the polishing pad. The method comprises dispersing water-soluble particles such as beta-cyclodextrin into a crosslinking agent such as a polypropylene glycol so as to obtain a dispersion, mixing the dispersion with a polyisocyanate such as 4,4'-diphenylmethane diisocyanate and/or an isocyanate terminated urethane prepolymer, and reacting the mixed solution so as to obtain a polishing pad having the water-soluble particles dispersed in the matrix.

\[
\begin{align*}
\text{CH}_2\text{O(CH}_2\text{CH(CH}_3\text{)O})_a\text{H} \\
\text{CHO(CH}_2\text{CH(CH}_3\text{)O})_b\text{H} \\
\text{CH}_2\text{O(CH}_2\text{CH(CH}_3\text{)O})_c\text{H}
\end{align*}
\]
Zusammenfassung:

Source: US2004118051 AA [EN] A polishing pad of the present invention contains a water-insoluble matrix material comprising a crosslinked polymer such as a crosslinked 1,2-polybutadiene and water-soluble particles dispersed in the material, such as saccharides. The solubility of the water-soluble particles in water is 0.1 to 10 wt percent at 25 degrees centigrade, and the amount of water-soluble particles eluted from the pad when the pad is immersed in water is 0.05 to 50 wt percent at 25 degrees centigrade. Further, in the polishing pad of the present invention, the solubility of the water-soluble particles in water is 0.1 to 10 wt percent at 25 degrees centigrade at a pH of 3 to 11, and solubility thereof in water at 25 degrees centigrade at a pH of 3 to 11 is within ±50 percent of solubility thereof in water at 25 degrees centigrade at a pH of 7. In addition, the water-soluble particles contain an amino group, an epoxy group, an isocyanurate group, and the like. This polishing pad has good slurry retainability even if using slurries different in pH and also has excellent polishing properties such as a polishing rate and planarity.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 109
ABRASIVE ARTICLES AND METHODS OF MAKING AND USING THE SAME

Patentnummer: WO2004012906A1

Anmeldung: WO2003US16605
              EP20030731382
              DE20036017068T
              US20020211755
              JP20040525983T
              AU20030240787
              CN20038018459
              AT20030731382T
              BR2003PI12984

Priorität:   US20020211755 20020802
              WO2003US16605 20030528

Patentfamilie: WO2004012906A1
               EP1525074B1
               EP1525074A1
               DE60317068T2
               DE60317068D1
               US6755878B2
               US2004020133A1
               JP2005534511T2
               AU2003240787A1
               CN1671511A
               CN100352607C
               AT376478E
               BRPI0312984A

Anmelder:  3M INNOVATIVE PROPERTIES CO

Erfinder:  FOLLENSBEE ROBERT A
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           PAXTON RICHARD T
           SLAMA DAVID F
           SWANSON MARK A

IPC-Notationen: B24B0037-00
                B24D0011-00
                B24D0011-02

CPC-Notationen: B24D0011-02

Zusammenfassung:
Source: US2004020133 AA [EN] Abrasive articles have an adhesive layer in contact with a liner having protrusions that contact the adhesive layer.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 110
Titel: GRANULAR ABRASIVE MATERIAL
Patentnummer: DE3604848C2
Anmeldung: DE19863604848
US19930022743
JP19860276904
GB19860027768
FR19860016219
AT19860002748
CH19860004185
IT19860085645
NL19860003018
NO19860004194
SE19860004512
Priorität: DE19863604848 19860215
US19860942263 19861216
US19890302122 19890126
US19900518336 19900507
US19910713006 19910610
US19920938508 19920831
US19930022743 19930218
Patentfamilie: DE3604848C2
DE3604848A1
US5259147A
JP62192480A2
JP2040277B4
JP1612740C3
GB2186588B2
GB2186588A1
GB8627768A0
FR2594433B1
FR2594433A1
AT394857B
AT274886A
CH667082A
IT1201911A
IT8685645A0
NL8603018A
NO864194L
NO167972C
NO167972B
NO864194A
NO864194A0
SE8604512L
SE464872C
SE464872B
SE8604512A0
Anmelder: FUERAI SHIYUMIRUGERU AND MAS FAB
FUERAI SHIYUMIRUGERU AND MASCHF
FUERAI SHUMIRUGERU UNTO MAS FA
SCHMIRGEL U MASCH FABR VER
VER SCHMIRGEL AND MASCHF
VER SCHMIRGEL U MASCHINEN FABR
Zusammenfassung:
Source: US259147 A [EN] A granular abrasive material is produced from a dispersion consisting of raw materials containing alumina, compounds containing silica and other additives. The dispersion is ground to a sinterable slip with a grain size of less than 1 micrometer. The slip is dried and may be pressed before being subjected to a multi-stage heating process to produce sintered corundum crystals.
Source: US2013059506 AA [EN] A fixed abrasive pad (100) in the form of a structured abrasive article is provided that has a structured abrasive layer (120) disposed on a backing (110). The structured abrasive layer (120) includes a polymeric binder, abrasive particles dispersed in the binder and a nonionic polyether surfactant dispersed in the binder. The abrasive particles have a mean particle size of less than 200 nm and the surfactant is in the binder in an amount of from 0.75 to 2.2 weight percent based upon the total weight of the structured abrasive layer. A method of abrading a workpiece using the provided fixed abrasive pad is also provided.
Zusammenfassung:

Source: US6435958 BA [EN] An abrasive element for grinding samples during supply of liquid lubricant includes a layer of binding agent containing grains of a grinding agent and particles of an organic acid, the organic acid being soluble in the lubricant and the particles thereof having sizes of 5 to 250 and mum
Titel: ABRASIVE ARTICLE WITH IMPROVED PACKING DENSITY AND MECHANICAL PROPERTIES AND METHOD OF MAKING

Patentnummer: WO2010075050A3

Anmeldung: WO2009US67960
              EP20090835567
              US20090624572
              CA20092760866
              AU20090330425
              TW20090143274
              AR2009P105075
              TH20091005794

Priorität: US20080140289P 20081223
           US20090624572 20091124
           WO2009US67960 20091215

Patentfamilie: WO2010075050A3
                WO2010075050A2
                EP2406039A4
                EP2406039A2
                US8523968B2
                US2010154316A1
                CA2760866A
                AU200930425A1
                TW201024028A
                TWI418440B
                AR074877AA
                TH109315A

Anmelder: FIFE JOEL ALAN
           SAINT GOBAIN ABRASIFS SA
           SAINT GOBAIN ABRASIVES INC
           ZUYEV KONSTANTIN S

Erfinder: FIFE JOEL ALAN
           ZUYEV KONSTANTIN S

IPC-Notationen: B24B0037-04
                B24B0037-24
                B24D0003-00
                B24D0003-04
                B24D0003-34
                B24D0018-00
                B24D0099-00
                B32B0027-14
                C09C0001-68
                C09K0003-14

CPC-Notationen: B24D0003-28
                B24D0003-34
                B24D0011-001
                B24D0018-00
                C09K0003-1409
                C09K0003-1436

Zusammenfassung:
Source: US2010154316 AA [EN] An abrasive article with improved packing density and mechanical properties and method of making are disclosed. A method of making an abrasive mix with improved processability facilitates improved packing density, resulting in abrasive articles with improved mechanical properties.
Title: POROUS POLISHING PAD AND PROCESS FOR PRODUCING THE SAME

Patentnummer: US2019314954A1

Anmeldung: US20190385653
JP20190077738
CN201910305360
KR20180044465
TW20190113212

Priorität: KR20180044465 20180417
JP20190077738 20190416

Patentfamilie: US2019314954A1
JP2019188594A2
CN110385641A
KR20190121009A
KR102054309B1
TW201943774A

Anmelder: SK C AND C
SKC CO LTD

Erfinder: AHN JAE IN
HEO HYE YOUNG
SEO JANG WON
YUN JONG WOOK
YUN SUNG HOON

IPC-Notationen: B24B0037-20
B24B0037-22
B24B0037-24
B24D0003-28
B24D0003-32
B24D003-34
B24D0011-00
B24D0018-00
B29C0039-02
C08G0018-10
C08J0005-14
C08J0009-04
C08J0009-32
C08L0075-04
H01L0021-304

CPC-Notationen: B24B0037-20
B24B0037-22
B24B0037-24
B24D0003-28
B24D0003-34
B24D003-34
B24D0011-00
B24D0018-00
B29C0039-02
C08G0018-10
C08J0009-04
C08J0009-32
C08J2203-22
C08J2205-044
C08J2205-048
C08J2207-00
C08J2375-04
H01L0021-304
H01L2924-069

Zusammenfassung:
Source: US2019314954 AA [EN] Embodiments relate to a porous polishing pad for use in a chemical mechanical planarization (CMP) process of semiconductors and a process for preparing the same. According to the embodiments, the size and distribution of the plurality of pores contained in the porous polishing pad can be adjusted in light of the volume thereof. Thus, the plurality of pores have an apparent volume-weighted average pore diameter in a specific range, thereby providing a porous polishing pad that is excellent in such physical properties as polishing rate and the like.
Zusammenfassung:
Source: US2017312886 AA [EN] It is an object of the present invention to provide an abrasive material which enables: processing efficiency and finished planarity of a substrate material to be simultaneously improved at a high level; polishing costs to be reduced; and a difficult-to-process substrate composed of sapphire or silicon carbide to be polished efficiently and precisely. An abrasive material comprises a substrate and an abrasive layer laminated on a front face side of the substrate, wherein the abrasive layer includes a binder containing an inorganic substance as a principal component, and abrasive particles dispersed in the binder, wherein a front face of the abrasive layer comprises a plurality of regions provided through dividing by grooves, and wherein a maximum peak height (Rp) on the front face of the abrasive layer is no less than 2.5 micro m and no greater than 70 micro m
Titel: ABRASIVE PRODUCTS AND METHODS FOR FINISHING SURFACES

Patentnummer: WO2013138765A1

Anmeldung: WO2013US32402
US20130839921
GB20170016227
GB20140018275
CA20132867350
CN201380011959
CH20140001313
MX20140010552
RU20140140666

Priorität: US20120611811P 20120316
US20120611881P 20120316
US20130839921 20130315
WO2013US32402 20130315

Patentfamilie: WO2013138765A1
US9138867B2
US2013298471A1
GB2515946B2
GB2515946A1
GB201716227A0
GB201418275A0
CA2867350C
CA2867350A
CN104144769A
CH708019B1
MX353248B
MX2014010552A1
RU2595788C2
RU2014140666A

Anmelder: CAI YING
MANNING JAMES J
SAINT GOBAIN ABRASIFS SA
SAINT GOBAIN ABRASIVES INC
SENT GOBEN EBREJIVS INC
WANG JIANNA

Erfinder: CAI YING
MANNING JAMES J
WANG JIANNA
YING CAI

IPC-Notationen: B24B0037-24
B24D0003-00
B24D0003-04
B24D0003-28
B24D0011-00
B24D0018-00
C09C0001-68
C09K0003-14

CPC-Notationen: B24B0037-245
B24D0003-28
C09K0003-1436
Zusammenfassung:

Source: US2013298471 AA [EN] An engineered coated abrasive product having a three dimensional pattern of abrasive structures formed by embossing an abrasive slurry formulation that was first surface coated with a functional powder, wherein the abrasive slurry includes green, unfired abrasive aggregates having a generally spheroidal or toroidal shape, the aggregates formed from a composition comprising abrasive grit particles and a nanoparticle binder. The coated abrasive product is capable of finishing and repairing defects in surfaces, including coated surfaces

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 117
Zusammenfassung:

Source: US2020316754 AA [EN] An abrasive article includes a body and an electronic assembly coupled to the body, the electronic assembly including an electronic device, and a first portion between the body and the communication device, the first portion having a material of an average relative magnetic permeability of not greater than 15.
DIAMOND TOOL - USING METAL COATED DIAMONDS THE METAL CONTG ABRASION AND FRICTION REDUCING ADDITIVES

Anmelder: WINTER AND SOHN ERNST
Erfinder: WIEMANN H J


Zusammenfassung:
Source: FR2127672 A5 [EN] Tool for cutting shavings, esp. an abrasive disc made with diamond or from nitride particles coated with a metal and embedded in a soft metal wherein the coating metal contains SiC as abrasion resistant additive and graphite to resist friction. The soft metal filler is esp. Ag
Titel: ABRASIVE ARTICLES AND METHODS FOR MAKING SAME
Patentnummer: WO2006112909A1
Anmeldung: WO2006US02836
EP20060719620
EP20060719619
DE200660016091T
DE200660010822T
US20090563888
US2007962002
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|               | AR052367AA     |
|               | AT450346E      |
|               | AT477084E      |
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|               | BRPI0608177A2  |
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RU2374062C2
RU2007132461A
RU2007137995A
TH81369A
TH81943A
UA86300C2
ZA200705903A

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YOU XIAORONG

Erfinder: GAETA ANTHONY C
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RAJS UIL JAM S
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XIAORONG YOU
YOU XIAO RONG
The disclosure is directed to a radiation curable composition including abrasive grains and a binder composition. The binder composition includes about 10 wt percent to about 90 wt percent cationically polymerizable compound, not greater than about 40 wt percent radically polymerizable compound, and about 5 wt percent to about 80 wt percent particulate filler based on the weight of the binder composition. The particulate filler includes dispersed submicron particulates.
Titel: METAL-COATED CUBIC BORON NITRIDE ABRASIVE GRAIN, PRODUCTION METHOD THEREOF, AND RESIN BONDED GRINDING WHEEL

Patentnummer: WO2004061041A1

Anmeldung: WO2004JP00015
EP20040700295
DE200460027757T
US20040751116
JP20050507666T
CN200480001827
KR20057012496
AT20040700295T
PT20040700295T
ZA20050004865

Priorität: JP20030000448 20030106
US20030440385P 20030116
US20040751116 20040105
WO2004JP00015 20040106
WO2004JP00015 20050701

Patentfamilie: WO2004061041A1
EP1702969B1
EP1702969A1
EP1702969A4
DE602004027757D1
US7097678B2
US2005081454A1
JP2004061041A1
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JP3795517B1
CN1723254A
CN1323806C
KR20050088151A
KR100724678B1
AT471361E
PT1702969T
ZA200504865A

Anmelder: IHARA EIJI
OTSUBO HIROHIKO
SHIMIDZU TATSUYA
SHOWA DENKO KK

Erfinder: IHARA EIJI
OTSUBO HIROHIKO
SHIMIDZU TATSUYA
TATSUYA OHTSUBO HIROHIKO IHARA
Zusammenfassung:
Source: US2005081454 AA [EN] A metal-coated cubic boron nitride abrasive grain obtained by forming grooves, in which the ratio (w/d) of the width (w) to the depth (d) is less than 1, and the ratio (w/L) of the width (w) to the length (L) is less than 0.1, on the surface of a cubic boron nitride abrasive grain. In this cubic boron nitride abrasive grain, the retention force (bonding strength) between the metallic coating and the cubic boron nitride abrasive grain is improved; therefore, it is possible to fabricate a resin bonded grinding wheel, in which a high grinding ratio (long life) and a low grinding power (superior grinding performance) are achieved, using such cubic boron nitride abrasive grains.
Titel: Vitreous *grinding tool* containing metal coated *abrasive*

Patentnummer: WO9737815A1

Anmeldung: WO1997US06274
EP19970918647
DE19976009080T
US19960670857
JP19970536540T
JP19970536540
CA19972246726
AU19970026704
CN19971093678
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AR1997P101410
AT1997018647T
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Priorität: US19960015112P 19960410
US19960670857 19960628
WO1997US06274 19970407

Patentfamilie: WO9737815A1
EP0892696B1
EP0892696A1
DE69709080T2
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JP11509785T2
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CN1218429A
CN1080622C
KR20000005280A
KR100362797B1
TW371637B
AR006580AA
AT210536E
IN206507B
IN00711MA1997A
ZA9702907A

Anmelder: NORTON CO
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LI ROUNAN

IPC-Notationen: B24D
B24D0003-00
B24D0003-02
B24D0003-04
B24D0003-14
B24D0003-18
B24D0005-06
C09K
C09K0003-14

CPC-Notationen: B24D0003-18
C09K0003-1445
Zusammenfassung:

Source: US5607489 A [EN] A vitreous bonded abrasive tool comprises 12 to 50 percent bond, 5 to 50 percent metal coated superabrasive, at least 10 percent porosity and 2 to 20 percent solid lubricant. The abrasive tool containing titanium or nickel coated diamond is particularly effective in grinding ceramic material, such as sapphire.
Titel: METAL-COATED ABRASIVES, GRINDING WHEEL USING METAL-COATED ABRASIVES AND METHOD OF PRODUCING METAL-COATED ABRASIVES

Patentnummer: WO03084717A1
Anmeldung: WO2003JP04654
EP20030723106
DE20036045186
US20030509855
JP20020301214
AU20030230237
CN20038007719
KR20047015907
PT20030723106T
ZA20040007652

Priorität: JP20020108727 20020411
US20020372431P 20020416
JP20020301214 20021016
EP20030723106 20030411
WO2003JP04654 20030411
US20040509855 20040930

Patentfamilie: WO03084717A1
EP1497077B1
EP1497077A1
EP1497077A4
DE60345186D1
US2005129975A1
JP2004001165A2
AU2003230237A1
CN1646267A
KR20040097294A
KR100599349B1
PT1497077T
ZA200407652A

Anmelder: IHARA EIJI
SHOWA DENKO K K

Erfinder: IHARA EIJI

IPC-Notationen: B24D
B24D0003-00
B24D0003-06
B24D0003-28
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B24D0011-00
C09K0003-14
CPC-Notationen: B24D0003-00
B24D0003-06
B24D0005-00
B24D0018-0018
C09K0003-14
C09K0003-1445
C25D0005-08
Y10T0428-12931
Zusammenfassung:
Source: US2005129975 AA [EN] The present invention provides an abrasive which can attain a sufficient retention force in a resinoid grinding wheel even in the case of a small grain size. The abrasive is produced by bonding plural abrasive grains coated with a metal layer by a metal. The metal layer is made of the metal selected from the group consisting of nickel, nickel-phosphorus, cobalt, cobalt-phosphorus, titanium, copper, chromium, iron, zirconium, niobium, molybdenum and tantalum. Also the abrasive grains are made of at least one selected from the group consisting of hard substances such as cubic boron nitride, diamond, alumina and silicon carbide, each having an average grain size within a range from 0.5 to 300 µm.
Zusammenfassung:

Source: US2018243885 AA [EN] An abrasive tool includes a support, on which a plurality of abrasive flaps is arranged. The abrasive flaps each have a base and abrasive material, which is attached to the base by means of a binder. To increase the useful life and total material abrasion, the abrasive flaps are reinforced by a cured filling resin. The reinforcement of the abrasive flaps reduces the cyclical deflection thereof around a zero position due to workpiece machining, thereby avoiding increased wear on the abrasive flaps.
Titel: A GRINDSTONE
Patentnummer: WO8905712A1
Anmeldung: WO1987FI00169
JP19870500562T
FI19900002946
NO19900002651
Priorität: WO1987FI00169 19871215
FI19900002946 19900612
Patentfamilie: WO8905712A1
EP0390775A1
JP3502554T2
FI902946A0
NO902651L
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Anmelder: PARTEK AB
Erfinder: KEPO MARTTI
NURMI TOIVO
PALM CARL OLOF
SUNDEN FRED
IPC-Notationen: B24D
B24D0003-02
B24D0003-04
B24D0003-12
B24D0003-14
B24D0003-34
B24D0018-00
C04B0014-02
C04B0014-04
C04B0014-38
CPC-Notationen: B24D0003-12
B24D0003-346
B24D0018-0009
Zusammenfassung:
Source: WO8905712 A1 [EN] The invention relates to a grindstone for production of ground-wood pulp. The grinding surface is formed by grinding grits and a concrete matrix binding together the grits. The matrix comprises a cement mixture, and the hardness of the cement mixture in relation to the grits is so controlled that the grinding surface is self-sharpening during the grinding process. The invention is also concerned with a method for the manufacture of a casting mixture for a grindstone. The method comprises the steps of mixing together water and a slowhardening, sulphate-resisting low-heat Portland cement mixture, the water/cement ratio being about 0.30 to 0.35; effecting the rheology of the casting mixture by a plasticizing agent instead of excess water; and compacting the mixture by stirring, vibrating, compressing or in some other way
Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 125
Composite abrasive-articles and manufacturing method therefor

Source: US5011510 A [EN] A composite abrasive-articles according to the present invention is obtained by: mixing diamond pieces of abrasive articles or cubic boron nitride pieces of abrasive articles and metal powder, molding this mixture into a uniformed small piece of abrasive articles, then or simultaneously with this molding, completely sintering the uniform small piece of abrasive articles after the molding, and mixing the completely sintered piece of abrasive articles after the sintering with resin, metal or glass of a low melting point so as to be solidified into a predetermined shape. In the composite abrasive-article of this type, the completely sintered piece of abrasion articles made of the diamond pieces of abrasion articles or cubic boron nitride piece of abrasive articles and metal powder is dispersed and solidified in a matrix made of either resin, metal, or glass having a low melting point. The composite abrasive-articles are preferably used for grinding, polishing, and/or cutting metal, ceramics, stone, or the like.
Anmelder: RAMANATH SRINIVASAN
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SAUCIER KENNETH A
UPADHYAY RACHANA

Erfinder: SAUCIER KENNETH A
SRINIVASAN RAMANATH
UPADHYAY RACHANA

IPC-Notationen: B24D0003-00
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                 C04B0028-00
                 C04B0035-64
                 C09C0001-68
                 C09K0003-14

CPC-Notationen: B24D0003-06
                 B24D0003-10
                 B24D0003-14
                 B24D0003-342
                 B24D0003-009
                 C09K0003-14

Zusammenfassung:

Source: US2012055098 AA [EN] An abrasive article includes a body having abrasive grains contained within a bond material comprising a metal or metal alloy, wherein the body comprises a ratio of VAG/VBM of at least about 1.3, wherein VAG is the volume percent of abrasive grains within the total volume of the body and VBM is the volume percent of bond material within the total volume of the body.
Title: Abrasive material for precision surface treatment and a method for the manufacturing thereof

Patent number: WO9514553A1

Application: WO1994IB00368
   EP19940931671
   DE1994G01685ST
   DE1994G016855T
   US19970823733
   US19940342087
   JP20050018892
   JP19950514941T
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   CN19941094269
   KR19960702738
   RU19960113049

Priority: BY19930001013 19931123
   US19940342087 19941117
   WO1994IB00368 19941121
   US19970823733 19970325

Patent family: WO9514553A1
   EP0730513B1
   EP0730513A1
   DE6941685ST2
   DE69416855D1
   US5711773A
   US6433343A
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   JP9505529T2
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Applicant: INZH TS PLAZMOTEG
   N INZH TS FIZ I T TONIKKH PLEN
   PLAZMOTEG ENGINEERING CENTER
   PLAZMOTEG ENGINEERING CT
   TEGO SCIENT AND ENGINEERING CT
   TEGO SCIENT AND ENGINEERING CT O

Inventor: AKULICH V V
   AKULICH VALERII VLADIMIROVICH
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   AKULICH VALERII VLADIMIROVICH
   SALIFANOV O V
   SELIFANOV OLEG VLADIMIROVICH
   TOCHITSKIJ EHDUARD IVANOVICH
   TOCHITSKY E I
   TOCHITSKY EDUARD IVANOVICH
An abrasive material is proposed which is useful for the precision treatment of surfaces. This material may be in the form of an abrasive layer adhered by chemical and/or physical bonds to a carrier, the latter preferably made of a flexible material such as plastic. Alternatively, the abrasive material may be in the form of a free abrasive without a carrier. The abrasive material may be in the form of a vacuum condensate consisting of at least 80 atomic percent of an ultradispersed composite superhard diamond-like substance, preferably containing carbon, and including not more than 0.1 atomic percent hydrogen and oxygen, combined. The abrasive material is preferably obtained from the pulse-flows of an accelerated electroerosive plasma.
Zusammenfassung:
Source: US2010037531 AA [EN] An abrasive composition including vitreous binding material; abrasive material; and a dimensional stabilizing additive (DSA), present in an amount that is from about 1 to about 40 volume percent of the abrasive composition, wherein the dimensionally stabilizing additive is inert to the binding material, and has a Mohs hardness of between 4 and 9, and wherein the abrasive composition does not include hollow sphere fillers. Also included is a method of making an abrasive articles, articles formed thereby; and articles formed from the abrasive compositions
COMPOSITE BOND WHEEL AND WHEEL HAVING RESIN BONDING PHASE

Source: US6187069 BA [EN] The present invention provides a composite bond wheel that has both excellent wear resistance and self-edging properties. The composite bond wheel of the invention includes: a grain layer including abrasive grains and a bonding phase; wherein the bonding phase includes a metal bonding phase and a resin bonding phase, wherein said metal bonding phase includes a metal having the abrasive grains and outside-opening pores dispersed therein, and wherein at least a portion of the outside-opening pores are filled with a resin of the resin bonding phase.
Titel: SUPER HARD ALLOY BASEPLATE OUTER CIRCUMFERENCE CUTTING BLADE AND MANUFACTURING METHOD THEREOF

Patentnummer: WO2012073855A1

Anmeldung: WO2011JP77311
EP20110844821
DE201160067182T
US20110990121
JP20150081469
JP20150081461
JP20110258631
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CN201180065608
KR20137016382
TW20110143755
PH2018500478
SG20130041520
TH20131002826

Priorität: JP20100264821 20101129
JP20100264828 20101129
EP20110844821 20111128
JP20110258611 20111128
JP20110258631 20111128
WO2011JP77311 20111128
JP20150081461 20150413
JP20150081469 20150413

Patentfamilie: WO2012073855A1
EP2647469B1
EP2647469A1
EP2647469A4
DE602011067182D1
US2013252521A1
JP2015163431A2
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JP2012131017A2
JP2012131016A2
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JP5776515B2
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CN103313825B
KR20140005911A
TW2012138715A
TW1556913B
PH2018500478B
PH2018500478A
SG190924A1
TH75073B
TH135313A

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MINOWA TAKEHISA
NAGASAKI YOSHIFUMI
SHIN ETSU CHEMICAL CO LTD
SHIN ETSU EHEMICAL CO LTD
SHINETSU CHEMICAL CO
The disclosed cemented carbide base outer blade cutting wheel comprises a base in the form of an annular thin disc of cemented carbide, and a blade section on the outer periphery of the base. The blade section contains: diamond and/or CBN abrasive grains pre-coated with a magnetic material; a metal or alloy bond formed by electroplating or electroless plating for bonding abrasive grains together and to the base; a resin infiltrated between abrasive grains and between abrasive grains and the base, said resin being a thermoplastic resin having a melting point of up to 350 degrees centigrade or a thermoset resin obtained by curing a liquid thermosetting resin composition having a curing temperature of up to 350 degrees centigrade. The method for manufacturing said outer blade cutting wheel is also disclosed.
Titel: VITREOUS BOND ABRASIVE ARTICLES AND METHODS OF MAKING THE SAME

Patentnummer: WO2016210057A1

Anmeldung: WO2016US38902
EP20160815259
US20160573326
JP20170566791T
CN201680036945

Priorität: US20150184695P 20150625
US20160573326 20160623
WO2016US38902 20160623

Patentfamilie: WO2016210057A1
EP3313614A1
EP3313614A4
US2018104793A1
JP2018522746T2
CN107787264A
CN107787264B

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: ADEFRIS NEGUS B
ANDERSON THOMAS J
FRANKE CARSTEN
GIVOT MAIKEN
GOERS BRIAN D
KEIPERT STEVEN J
SMITHSON ROBERT L W

IPC-Notationen: B24D0003-00
B24D0003-02
B24D0003-06
B24D0003-14
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B24D0011-04
B24D0018-00
B29C0064-165

CPC-Notationen: B24D0003-06
B24D0003-14
B24D0005-02
B24D0005-10
B24D0005-14
B24D0007-02
B24D0007-10
B24D0007-14
B24D0011-00
B24D0011-04
B24D0018-0009
B24D2203-00
B29C0064-165

Zusammenfassung:

Source: US2018104793 AA [EN] Methods of making vitreous bond abrasive articles and their precursors using powder bed jetting are disclosed. Vitreous bond abrasive articles prepared by the method include abrasive articles having arcuate or tortuous cooling channels, unitary structured abrasive discs, abrasive segments, shaped abrasive particles, and abrasive wheels.
Titel: SINTERED VITRIFIED SUPERFINISHING GRINDSTONE

Patentnummer: WO2016157560A1

Anmeldung: WO2015JP72213
US20150559716
JP20150075918

Priorität: JP20150075918 20150402
WO2015JP72213 20150805

Patentfamilie: WO2016157560A1
US10589401B2
US2018257199A1
JP2016196050A2
JP6446313B2

Anmelder: MIZUHO CO LTD
MIZUHO KK

Erfinder: MATSUMORI NOBORU
NABEMOTO TOSHIYUKI
NAKAZAWA TOSHIO

IPC-Notationen: B24D0003-00
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B24D0003-14
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C09G0001-02
C09K0003-14

CPC-Notationen: B24D0003-06
B24D0003-18
B24D0018-0009
C09G0001-02
C09K0003-1418
C09K0003-1454

Zusammenfassung:
Source: US2018257199 AA [EN] A sintered vitrified superfinishing grindstone is provided which is a sintered product which is obtained by compression molding of a mixed powder of: a sinterable vitrified binder composed of a powder of a borosilicate glass composition; hard abrasive grains; and soft abrasive grains; and which includes bonded portions formed by necking due to heat compression, between particles of the powder of the borosilicate glass composition which are in contact with each other; and wherein the sinterable vitrified binder contains from 94 to 100 percent by mass of a powder composed of a low-melting-point borosilicate glass composition containing from 35 to 55 percent by mole of SiO2; from 3 to 5 percent by mole of Al2O3; from 10 to 35 percent by mole of B2O3; and from 25 to 30 percent by mole of R2O+RO

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 133
Titel: BONDED ABRASIVE ARTICLES AND METHODS OF MANUFACTURE

Patentnummer: WO2016081302A1

Anmeldung: WO2015US60581
EP20150861920
DE201560047507T
US20190430669
US20150525457
JP20170527263T
CN201580063358
KR20177016570

Priorität: US20140083016P 20141121
EP20150861920 20151113
US20150525457 20151113
WO2015US60581 20151113
US20170525457 20170509
US20190430669 20190604

Patentfamilie: WO2016081302A1
EP3221087B1
EP3221087A1
EP3221087A4
DE602015047507D1
US10350732B2
US2019283214A1
US201734039A1
JP6758780B2
JP2018501967T2
CN107000168A
CN107000168B
KR20170086588A

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: LUKOWSKI MARK A

IPC-Notationen: B24D0003-00
B24D0003-02
B24D0003-18
B24D0003-20
B24D0003-26
B24D0003-32
B24D0003-34
B24D0003-00
C09K0003-14

CPC-Notationen: B24D0003-18
B24D0003-32
B24D0003-342
B24D0003-00
B24D0003-009
B24D0003-0072
C09K0003-1409

Zusammenfassung:

Source: US2017334039 AA [EN] Methods for manufacturing bonded abrasive articles, for example vitrified bonded grinding wheels. A bondable abrasive composition is prepared including abrasive particles, a binder medium and a gamma-pyrone pore inducing material, such as ethyl maltol. A precursor abrasive structure is formed from the composition. The gamma-pyrone pore inducing material is removed from the precursor abrasive structure to provide a porous precursor abrasive structure that is further processed to provide a bonded abrasive article. In some embodiments, the binder medium includes a vitreous bonding material, and the bonded abrasive article is a porous vitrified bonded grinding wheel.
FORMULATIONS FOR COATED DIAMOND ABRASIVE SLURRIES

Source: US2003175498 AA [EN] The present invention is directed to an abrasive article and methods of making the abrasive article. An abrasive coating on the abrasive article comprises at least 20 percent by weight of a superabrasive particle. The abrasive coating is derived from an abrasive slurry. The abrasive slurry may comprise and a dispersant having an AV wherein AV=1000*[ (Amine Value) / (Mw) ]. The dispersant comprises a polymer having a molecular weight (Mw) of greater than 500 g/mol and an AV of greater than 4.5, a polymer having a molecular weight (Mw) of greater than 10,000 g/mol and an AV of greater than 1.0, or a polymer having a molecular weight (Mw) of greater than 100,000 g/mol and an AV of greater than 0.
Titel: Abrasive article having vanadium oxide incorporated therein

Patentnummer: WO9324279A1

Anmeldung: WO1993US04749
EP19930913990
US19920893491
JP19940500617T
CA19932135060
AU19930043818
KR19940704405
TW19920104850
BR1993PI06477

Priorität: US19920893491 19920604
WO1993US04749 19930519

Patentfamilie: WO9324279A1
EP0643637A1
US5203884A
JP8503663T2
CA2135060A
AU663393B2
AU199343818A1
KR950701856A
TW223034B
BR1993PI06477A

Anmelder: 3M CO
MINNESOTA MINING AND MFG

Erfinder: BOSTON DAVID R
BUCHANAN SCOTT J
HEDRICK STEVEN T
KAUSCH WILLIAM L
LARSON WAYNE K
MORRISON ERIC D

IPC-Notationen: B24D0003-00
B24D0003-02
B24D0003-20
B24D0003-28
B24D0003-34
B24D0011-00
F16H0001-32
F16H0055-02
F16H0055-24

CPC-Notationen: B24D0003-28

Zusammenfassung:

Source: US5203884 A [EN] An abrasive article (i.e., a coated abrasive article or a three-dimensional, low density abrasive article) having a sufficient amount of vanadium oxide incorporated therein to provide having a reduced tendency to buildup static electricity during the abrading of a workpiece. Preferably, the abrasive article further comprises a compatible binder (preferably, a sulfonated polymer) to aid in securing the vanadium oxide to the abrasive article. In another aspect, a method of making the same is taught.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 136
Titel: RESIN SYSTEMS FOR COATED PRODUCTS; AND METHOD

Patentnummer: EP0321230B1

Anmeldung: EP19880311853 
DE1988385253T 
US19870132485 
JP19880316083 
CA19880585725 
AU19880026812 
CN19881009282 
KR19880016766 
BR1988P06605 
MX19880014175 
ZA19880009325

Priorität: US19870132485 19871214 
CA19880585725 19881213

Patentfamilie: EP0321230B1 
EP0321230A3 
EP0321230A2 
DE3885253T2 
DE3885253D1 
US4871376A 
JP1222867A2 
JP8022510B4 
CA1331284A1 
AU611510B2 
AU198826812A1 
CN1035306A 
CN1026566C 
KR19890009541A 
KR970009217B1 
BRPI8806605A 
MX165707B 
ZA8809325A

Anmelder: MINNESOTA MINING AND MFG

Erfinder: DEHART CAROLINE G 
DEWALD CAROLYN GRACE C O MINNE 
KIYARORIN GUREISU DEWARUDO 
WALD CAROLYN GRACE DE

IPC-Notationen: B24D0003-00 
B24D0003-02 
B24D0003-34 
B24D0011-00

CPC-Notationen: B24D0003-007 
B24D0003-002 
B24D0003-342 
Y10T0428-24372 
Y10T0442-2115

Zusammenfassung:

Source: US4871376 A [EN] Improved resin/filler compositions for use in forming coated abrasives having a substrate/bonding system/abrasive composite structure, are provided. Also, methods for making such improvements are described. In general, the improvements result from inclusion in the resin/filler composition, a coupling agent providing for bonding between the resin and the filler. Preferred classes of coupling agents comprise: silanes, titanates, and zirconaluminates. Improvements effected by methods according to the present invention concern: viscosity of resulting resin/filler mixtures, retention of filler in suspension with a resin, and improved performance characteristics of products made according to the method, in particular improved resistance to deterioration upon contact with water, or upon use and/or storage in humid environments.
<table>
<thead>
<tr>
<th>Datum des Suchlaufs:</th>
<th>07.04.2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dokument Nr.:</td>
<td>137</td>
</tr>
</tbody>
</table>
Titel: COATED ABRASIVE ARTICLE

Patentnummer: WO2017079513A1

Anmeldung: WO2016US60455
EP20160795215
US20160773232
GB20150019508

Priorität: GB20150019508 20151104
US20160773232 20161104
WO2016US60455 20161104

Patentfamilie: WO2017079513A1
EP3370918A1
US10611939B2
US2018320038A1
GB201519508A0

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: BEARD THOMAS A
HILL PHILIP S
KEEN POLLY H R
SMITH JAMES R

IPC-Notationen: B24D0003-00
B24D0003-02
B24D0003-34
B24D0011-00
B24D0018-00
C09K0003-14

CPC-Notationen: B24D0003-344
B24D0011-00
C09K0003-1436

Zusammenfassung:

Source: US2018320038 AA [EN] An abrasive article (100) comprising a backing (102); a make resin (112) contacting the backing (102); abrasive particles (114) contacting the make resin (112); and a size resin (116) contacting both the abrasive particles (114) and the make resin (112), wherein the make resin (112) includes an alkyl quaternary ammonium clay, which can take the form of Garamite.
**Titel:** ABRASIVE ARTICLES AND METHODS OF MAKING AND USING THE SAME

**Patentnummer:** WO2006127728A1

**Anmeldung:** WO2006US199577
US20050135766

**Priorität:** US20050135766 20050524

**Patentfamilie:** WO2006127728A1
US2006265966A1

**Anmelder:** 3M INNOVATIVE PROPERTIES CO
KEIPERT STEVEN J
ROSTAL WILLIAM J

**Erfinder:** KEIPERT STEVEN J
ROSTAL WILLIAM J

**IPC-Notationen:**
- B24D0003-00
- B24D0003-02
- B24D0011-02
- B24D0018-00

**CPC-Notationen:**
- B24D0003-004
- B24D0003-348
- B24D0011-02
- B24D0018-0027

**Zusammenfassung:**

Source: US2006265966 AA [EN] A coated abrasive article having a reinforced vulcanized fiber backing with an abrasive layer affixed thereto and methods of making and using the same. The reinforced vulcanized fiber backing contains a reinforcing material that comprises a reaction product of a curable material.

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**Datum des Suchlaufs:** 07.04.2021
**Dokument Nr.:** 139
Novel grinding wheels utilizing polycrystalline diamond or cubic boron nitride grit

The invention provides grinding tools comprising thermally stable polycrystalline diamond or cubic boron nitride abrasive particles and single crystal diamond or cubic boron nitride abrasive particles attached to a support means via a bonding matrix such as a sintered or electrodeposited metal or alloy matrix, a resinous matrix, or a vitreous matrix.
An abrasive article can include a body including a bond material and abrasive particles contained within the bond material. The abrasive particles can include nanocrystalline alumina. The bond material can include an inorganic material including a ceramic.
Titel: Manufacturing process for a metal bonded grinding tool and the metal bonded grinding tool produced thereby

Patentnummer: DE2413466A1

Anmeldung: DE1974213466
US19740453061
JP19730031366
GB19740011480
FR19740009548
AU19740066621

Priorität: JP19730031366 19730320

Patentfamilie: DE2413466A1
US3973925A
JP491192888A2
JP52027878B4
JP898212C3
GB1453671A
FR2222174B1
FR2222174A1
AU458695B2
AU197466621A1

Anmelder: IKUO SUZUKI
TOMOYASU IMAI
TOSHIO ASAEDA
TOYODA KOKI KK
TOYODA MACHINE WORKS LTD

Erfinder: ASAEDA TOSHIO
IMAI TOMOYASU
SUZUKI IKUO

IPC-Notationen: B24D0003-00
B24D0003-04
B24D0003-10
B24D0007-00
B24D0018-00

CPC-Notationen: B24D0007-00
B24D0018-0027

Zusammenfassung:
Source: US3973925 A [EN] A manufacturing process for a metal bonded grinding tool includes the steps of; (a) preparing a rim of porous material, (b) press-forming the abrasive grains in contact with the rim to a specified structural dimension, and (c) forcibly passing a chemical plating liquid through a contacting body of the abrasive grains and the rim obtained in step (b) for continuously making the metal precipitate on the surfaces of the abrasive grains and in the pores of the rim so as to uniformly and continuously bond therebetween in any grinding tool of desired dimension.
Titel: Titanium diboride-based composite articles with alumina dispersoids, having improved fracture toughness

Patentnummer: US4863490A
Anmeldung: US19880158493
Priorität: US19880158493 19880222
Patentfamilie: US4863490A
Anmelder: GTE LABORATORIES INC
Erfinder: BULJAN SERGEJ TOMISLAV V GEARY JR EARL G

IPC-Notationen: B24D0003-00
B24D0003-04
B24D0003-14
B24D0003-34

CPC-Notationen: B24D0003-00
B24D0003-14
B24D0003-342

Zusammenfassung:
Source: US4863490 A [EN] Composite articles, cutting tools, and wear parts are prepared by densification of a mixture comprising alumina whiskers, chopped fibers, or particles uniformly distributed in a titanium diboride matrix. Optionally, other dispersoids may also be incorporated. The preferred composite article or cutting tool has a fracture toughness equal to or greater than about 2.5 MN/m3/2. Methods of preparation and use are also presented.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 143
Title: GRINDING STONE WITH LUBRICATION PARTICLES AND MANUFACTURING METHOD THEREOF

Patentnummer: EP1462216A1

Anmeldung: EP20030029175
US20030737854
JP20030084674

Priorität: JP20030084674 20030326

Patentfamilie: EP1462216A1
US2004198205A1
JP2004291114A2

Anmelder: TOYODA MACHINE WORKS LTD

Erfinder: KASUGA SATOYUKI
KASUGA TOMOYUKI
MORITA HIROSHI
OKUBO SATOSHI
SOMA SHINJI
TAMASHIMA HIDEKI
YOSHIMI TAKAYUKI

IPC-Notationen: B24D0003-00
B24D0003-04
B24D0003-14
B24D0003-34
B24D0005-00
B24D0018-00
C09C0001-68

CPC-Notationen: B24D0003-348
B24D0018-0027

Zusammenfassung:

Source: US2004198205 AA [EN] A solid fats and oils is impregnated in an air space of a stone matrix, as lubrication particles, of a grinding stone. The fats and oils is melted out of the air space to a peripheral surface of the grinding stone to lubricate friction between the grinding stone and a workpiece and to create a space again in the air space of the stone matrix. The created space can perform to receive a cutting tip and to discharge it. The melted lubrication particles lubricate friction between the grinding stone and the workpiece to restrain a generation of heat in order to reduce a grinding resistance. As a result, it restrains a loss of grinding particles on the peripheral surface of the grinding stone to keep a high quality of the grinding characteristics of the workpiece and to extend a truing interval and a life of the grinding stone.
Source: US2019100683 AA [EN] An abrasive article including a body having a bond material extending throughout the body and including at least 8 wt percent aluminum oxide (Al2O3) for a total weight of the bond material, and also including unagglomerated abrasive particles including silicon carbide (SiC) contained within the bond material and present in an amount of greater than 30 vol percent for a total volume of the body.
Title: COATED ABRASIVE ARTICLE HAVING ALUMINA-ZIRCONIA ABRASIVE PARTICLES AND GLASS DILUENT PARTICLES

Patentnummer: WO2014028437A1

Anmeldung: WO2013US54648
    EP20130829591
    US20130421522
    JP20150527527T
    CN201380042475

Priorität: US20120684362P 20120817
    US20130421522 20130813
    WO2013US54648 20130813

Patentfamilie: WO2014028437A1
    EP2885109B1
    EP2885109A1
    EP2885109A4
    US2015217428A1
    JP2015525686T2
    CN104736298A
    CN104736298B

Anmelder: 3M INNOVATIVE PROPERTIES CO
    PROVOW RONALD D
    RAMBOSEK THOMAS W

Erfinder: PROVOW RONALD D
    RAMBOSEK THOMAS W

IPC-Notationen: B24D0003-00
    B24D0003-04
    B24D0003-34
    B24D0011-00
    C09C0001-68
    C09K0003-14

CPC-Notationen: B24D0003-04
    B24D0003-346
    B24D0003-346
    B24D0011-00
    C09K0003-1409

Zusammenfassung:

Source: US2015217428 AA [EN] A coated abrasive article having an abrasive layer formed from alumina-zirconia (AZ) abrasive particles and glass diluent particles was found to have excellent grinding performance when compared to abrasive layers formed from 100 percent AZ particles or a blend of 60 percent AZ particles and 40 percent aluminum oxide particles. Replacing the significantly harder aluminum oxide particles with the much softer glass particles while still being able to maintain the same performance of the abrasive disc was an unexpected result.

Datum des Suchlaufs: 07.04.2021

Dokument Nr.: 146
Zusammenfassung:

Source: US2018185985 A1 [EN] The purpose of the present invention is to provide a grinding material which has a superior grinding rate and planarizing accuracy, with the grinding rate being less likely to be reduced over a relatively long period of time. The present invention is directed to a grinding material including a base, a grinding layer overlaid on a front face side of the base and including grinding grains and a binder for the grinding grains, and an adhesion layer overlaid on a back face side of the base, in which the grinding grains are diamond grinding grains, a wear quantity of the grinding layer as determined by a Taber abrasion test is no less than 0.03 g and no greater than 0.18 g, and, an Asker D hardness measured from a front face side of the grinding layer is no less than 80 degrees and no greater than 98 degrees.
ABRASIVE PREFORMS, METHOD OF MAKING AN ABRASIVE ARTICLE, AND BONDED ABRASIVE ARTICLE

Patentnummer: WO2016064726A1
Anmeldung: WO2015US56205
            EP20150852282
            US20150518601
            JP20170521529T
            CN201580057557
            KR20177013317
            TH20171002167
Priorität:  US20140066432P 20141021
            US20150518601 20151019
            WO2015US56205 20151019
Patentfamilie: WO2016064726A1
            EP3209461A1
            EP3209461A4
            US10259102B2
            US2017225298A1
            JP6718868B2
            JP2017538588T2
            CN107073686A
            CN107073686B
            KR20170071557A
            TH176991A
Anmelder:  3M INNOVATIVE PROPERTIES CO
Erfinder:  BEVERIDGE JACOB S
            GOERS BRIAN D
            SCHILLO ARMSTRONG MELISSA C
IPC-Notationen: B24D0003-00
               B24D0003-06
               B24D0003-14
               B24D0005-04
               B24D0005-06
               B24D0007-02
               B24D0007-06
               B24D0018-00
               C09K0003-14
CPC-Notationen: B24D0003-001
               B24D0003-006
               B24D0003-14
               B24D0005-04
               B24D0005-06
               B24D0007-02
               B24D0007-06
               B24D0018-00
               B24D0018-0009
               B24D0018-0072

Zusammenfassung:
Source: US2017225298 AA [EN] Abrasive preforms include a frame having first and second opposed parallel major surfaces. The first major surface has a plurality of first cavities formed therein. The second major surface optionally has a plurality of second cavities formed therein. The frame comprises a binder precursor material. Abrasive particles are disposed in at least a portion of the plurality of first cavities and optional plurality of second cavities. Methods of making abrasive articles using the abrasive preforms and bonded abrasive articles preparable thereby are also disclosed.
Titel: Superabrasive tool
Patentnummer: EP0620082B1
Anmeldung: EP19970116020
              EP19940104911
              DE19946010338T
              US19930038301
              JP19940057372
              CA19942119306
              CN19941003179
              KR19940006183
              TW19940102711
              AT19940104911T
              BR1994P01298
              CL19940000444
              ES19940104911T
              HU19940000882
              IL19940109048
              NO19940001132
              PL19940302822
              RU19940009962
              SG19960005809
              SK19940000362
Priorität: US19930038301 19930329
          CA19942119306 19940317
          EP19940104911 19940328
          RU19940009962 19940328
Patentfamilie: EP0620082B1
               EP0620082A1
               EP0812659A3
               EP0812659A2
               DE69410338T2
               DE69410338D1
               US5443418A
               JP6297338A2
               JP3042749B2
               CA2119306C
               CA2119306A
               CN1093636A
               KR940021195A
               KR19940021195A
               TW241215B
               AT166276E
               BR19401298A
               CL39573B
               CL1994000444A1
               ES2115797T3
               HU217601B
               HU69242A2
               HU9400882A0
               IL109048A1
               IL109048A0
               NO941132L
               NO303567B1
               NO941132A
               NO941132A0
               PL173313B1
               RU2122934C1
               RU94009962A1
Anmelder: NOOTON CO
NORTON COMPANY
Erfinder: DZHEJMS JUDZHIN FRODIN
FRODIN JAMES EUGENE
JEEMUSU YUUJIIN FUROODEIN
JEEN KURANPU
JEEMUSU YUUJIIN FUROODEIN
JEEN KURANPU
KRAMP JEAN
PELLOW SCOTT W
SKOTT PELLOU
SUKOTSUTO PEROO
ZHAN KREHMP

IPC-Notationen: B24D0003-00
B24D0003-06
B24D0003-34
B24D0005-00
B24D0005-06
B24D0005-12
B24D0005-14
B24D0007-06
B24D0007-14
B24D0017-00
B28D0001-12
C04B0035-10
C04B0035-117
C04B0035-80

CPC-Notationen: B24D0003-06
B24D0005-123
B24D0005-14
B28D0001-121
C04B0035-117

Zusammenfassung:
Source: US5443418 A [EN] Superabrasive tools incorporating into the structure filamentary particles formed from a microcrystalline alumina confer significant advantages which depend on the orientation of the particles

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 149
**Titel:** ABRASIVE ARTICLE AND METHOD FOR MAKING THE SAME

**Patentnummer:** WO2013142988A1

**Anmeldung:**
- WO2013CA50173
- US20130373654
- CA20132866821
- CA20122773197

**Priorität:**
- CA20122773197 20120327
- CA20132866821 20130311
- WO2013CA50173 20130311

**Patentfamilie:**
- WO2013142988A1
- US2015290771A1
- CA2866821A
- CA2773197A

**Anmelder:** LI YUNDONG

**Erfinder:** LI YUNDONG

**IPC-Notationen:**
- B24D0003-00
- B24D0003-06
- B24D0005-06
- B24D0007-02
- B24D0007-06
- B24D0008-00

**CPC-Notationen:**
- B24D0003-06
- B24D0018-0018
- B24D0018-0072

**Zusammenfassung:**
Source: US2015290771 AA [EN] An abrasive article comprising a plurality of abrasive grains that are precisely arranged in accordance with a predetermined pattern and are chemically bonded with a matrix material, and a method for the making thereof are disclosed. A coating layer on each of the abrasive grains functions as a bridge to form chemical bonding between the abrasive grains and the matrix material. In addition to a plated material, the matrix material can include a braze, a solder, a sintered material, an infiltrant, an organic material, and a vitrified material. The method for making the abrasive article comprises the steps of: coating abrasive grains with a coating layer that chemically bonds to each of the abrasive grains; arranging the coated abrasive grains in accordance with a predetermined pattern; and chemically bonding the coated abrasive grains with a matrix material.

**Datum des Suchlaufs:** 07.04.2021

**Dokument Nr.:** 150
Titel: SHAPED ABRASIVE PARTICLES AND METHOD OF MAKING

Patentnummer: WO2012061016A1

Anmeldung: WO2011US56833
EP20110838450
DE201160057625T
US20170806794
US20150701559
US20110818365
JP20130536668T
CN201180048902
KR20137013584
BR20131109469

Priorität: US20100408788P 20101101
EP20110838450 201111019
US20110818365 201111019
WO2011US56833 201111019
US20130818365 20130222
US20150701559 20150501
US20170806794 20171108

Patentfamilie: WO2012061016A1
EP2635405B1
EP2635405A1
EP2635405A4
DE602011057625D1
US9822291B2
US903979782
US10669461B2
US2018066169A1
US2015232727A1
US2013263652A1
JP6021814B2
JP2013545840T2
CN103153544A
CN103153544B
KR20140066659A
KR101863393B1
BR112013009469B1
BR112013009469A8
BR112013009469A2

Anmelder: 3M INNOVATIVE PROPERTIES CO
ERICKSON DWIGHT D

Erfinder: ERICKSON DWIGHT D
ERICKSON DWIGHT D

IPC-Notationen: B24D0003-00
B24D0003-06
B24D0018-00
C09C0001-68
C09K0003-14

CPC-Notationen: B24D0003-008
C09K0003-1418
Zusammenfassung:

Source: US2013263525 AA [EN] A method of making shaped abrasive particles including forming an abrasive flake comprising a plurality of precursor shaped abrasive particles and a frangible support joining the precursor shaped abrasive particles together; transporting the abrasive flake through a rotary kiln to sinter the abrasive flake; and breaking the sintered abrasive flake into individual shaped abrasive particles. The method is useful to make small shaped abrasive particles having insufficient mass to be efficiently individually sintered in a rotary kiln without joining two or more of the shaped abrasive particles together.
Titel: ABRASIVE ARTICLE HAVING SHAPED SEGMENTS

Patentnummer: WO2014105638A1

Anmeldung: WO2013US76569
EP20200150800
EP20130868740
DE201360065569T
US20170613868
US20150843755
US20130132140
AU20130371043
KR20157019876
PL20130868740T

Priorität: US20120747965P 20121231
US20130132140 20131218
EP20130868740 20131219
WO2013US76569 20131219
US20150843755 20150902
US20170613868 20170605

Patentfamilie: WO2014105638A1
EP2938463B1
EP3666463A1
EP2938463A1
EP2938463A4
DE602013065569D1
US9700993B2
US9149913B2
US10456890B2
US2017266782A1
US2015375368A1
US2014187130A1
AU2013371043B2
AU2013371043A1
KR20150100834A
KR101803704B1
PL2938463T3

Anmelder: SAINT GOBAIN ABRASIFS SA
SAINT GOBAIN ABRASIVES INC AND SAINT GOBAIN ABRASIFS

Erfinder: GOSAMO IGNAZIO

IPC-Notationen: B24D0003-00
B24D0003-10
B24D0005-06
B24D0007-06
B24D0018-00
B24D0099-00
B28D0001-12

CPC-Notationen: B24D0003-10
B24D0005-06
B24D0007-06
B24D0018-0005
B24D0099-005
B28D0001-122
Zusammenfassung:

Source: US2014187130 AA [EN] An abrasive segment can include an inner segment portion, an outer segment portion, and a central segment portion connected thereto. The inner segment portion can include an inner circumferential wall and an outer circumferential wall. Leading and trailing radial sidewalls can extend between the inner circumferential wall and the outer circumferential wall opposite each other. The outer segment portion can include an inner circumferential wall and an outer circumferential wall. Leading and trailing radial sidewalls can extend between the inner circumferential wall and the outer circumferential wall opposite each other. The central segment portion can include a leading radial sidewall and a trailing radial sidewall. The leading radial sidewall of the central segment portion can establish an acute angle, \( \alpha \), with respect to the outer circumferential wall of the inner segment portion and an obtuse angle, \( \beta \), with respect the inner circumferential wall of the outer segment portion.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 152
**Title:** ABRASIVE ARTICLE REINFORCED BY DISCONTINUOUS FIBERS

**Patent Number:** WO2014210440A1

**Application:** WO2014US44539
WO2014US44515
EP20140817405
EP20140816604
US20140317340
US20140317117
CN201480043929

**Priority:** US20130840902P 20130628
US20130840906P 20130628
US20130840919P 20130628
US20130840933P 20130628
US20130841052P 20130628
US20140317117 20140627
US20140317340 20140627
WO2014US44515 20140627
WO2014US44539 20140627

**Patent Family:**
- WO2014210440A1
- WO2014210426A1
- EP3013529A1
- EP3013527A1
- EP3013529A4
- EP3013527A4
- US9855639B2
- US9776303B2
- US2015000206A1
- US2015000204A1
- CN105451942A
- CN105451942B

**Applicants:**
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- LAVallee LAWRENCE J JR
- PARSONS STEVEN F

**IPC Notations:**
- B24D0003-00
- B24D0003-20
- B24D0003-22
- B24D0003-28
- B24D0003-34
- B24D0005-04
- B24D0005-14
- B24D0005-16
- B24D0007-04
- B24D0007-14
- B24D0007-16
- B24D0011-02
- C03C0025-48
- C03C0025-50

**CPC Notations:**
- B24D0003-20
- B24D0003-22
- B24D0003-28
- B24D0003-34
- B24D0005-04
- B24D0005-14
- B24D0005-16
- B24D0007-04
- B24D0007-14
- B24D0007-16
- B24D0011-02
- C03C0025-48
- C03C0025-50
Source: US2015000204 AA [EN] An abrasive article has an abrasive portion and chopped strand fibers (CSF) with enhanced strength and/or fracture of toughness. The CSF may be coated with a thermoplastic having a loss on ignition of at least about 2 wt percent. The CSF can have a primary coating and a secondary coating on the primary coating. At least some of the CSF can have a length of at least about 6.3 mm.
Zusammenfassung:

Source: US2003192258 AA [EN] A method for producing organically bonded abrasive article includes combining an abrasive grain component and a phenol-based resin component. The combined components are molded and thermally cured in an atmosphere that comprises humidity, wherein the atmosphere contacts the molded components, thereby producing the organically bonded abrasive grain. The abrasive grain optionally can first be combined with an organosilicon compound, to form organosilicon-treated abrasive grain, and then with the phenol-based resin component. In one example, the phenol-based resin is thermally cured in the presence of steam. Abrasive articles produced by the method of the invention generally have improved properties under wet grinding conditions. In one example, an abrasive article produced by the method of the invention includes ammonia in an amount less than about 50 ppm. In another example, an abrasive grinding wheel produced by the method of the invention has a strength retention greater than about 57 percent.
Titel: COMPOSITE ABRASIVE WHEEL

Patentnummer: WO2013070576A3

Anmeldung: WO2012US63662
EP20120847458
DE201260028094T
US20120353467
JP20140541150T
CA20122857088
CN201280052914
KR20147015449
BR20141111329
IN2014CN03358
MX20140005248
PL20120847458T
RU20140118633
TR20170005321T

Priorität: US20110557563P 20111109
EP20120847458 20121106
US20120353467 20121106
WO2012US63662 20121106

Patentfamilie: WO2013070576A3
WO2013070576A2
EP2776210B1
EP2776210A4
EP2776210A2
DE602012028094D1
US9321149B2
US2014256238A1
JP6099660B2
JP2015501731T2
CA2857088C
CA2857088A
CN104023916A
CN104023916B
KR20140101757A
KR101951978B1
BR112014011329A2
IN347037B
IN03558CN2014A
MX349839B
MX20140005248A1
PL2776210T3
RU2599067C2
RU2014118633A
TR201705321T4

Anmelder: 3M INNOVATIVE PROPERTIES CO
NGUYEN THU A
VAN LOC X

Erfinder: NGUYEN TKHU A
THU A NGUYEN
VAN LOC X
VAN LOK S
Zusammenfassung:
Source: US2014256238 AA [EN] A composite abrasive wheel comprises primary and secondary abrasive portions. The primary abrasive portion comprises shaped ceramic abrasive particles retained in a first organic binder. The secondary abrasive portion is bonded to the primary abrasive portion, and comprises secondary crushed abrasive particles retained in a second organic binder. The primary abrasive portion comprises a larger volume percentage of the shaped ceramic abrasive particles than the secondary abrasive portion. A central aperture extends through the composite abrasive wheel
Title: Anti-weld additives for coated abrasive bonds

Patentnummer: US3058819A

Anmeldung: US19590786851  
GB19590044012  
FR19600815195

Priorität: US19590786851 19590114

Patentfamilie: US3058819A  
GB941973A  
FR1245180A

Anmelder: CARBORUNDUM CO

Erfinder: PAULSON WILLIAM T


Zusammenfassung:

Source: GB941973 A [EN] A coated abrasive article characterized by resistance to glazing comprises a backing, abrasive particles, and a bond securing the particles to the backing comprising a phenolic resin and a minor amount of thiourea or derivatives thereof, a mercaptan or a polysulphide. The article may have a making coat of a phenolic resin and a sand size comprising a resinous condensation product of a phenol, an aldehyde and a minor amount of thiourea or derivative thereof, a mercaptan or a polysulphide. The aldehyde may be formaldehyde. Thiourea may be present in an amount from 2 to 20 percent by weight based on the initial phenol. Thiourea derivatives referred to are methyl-thiourea, phenyl-thiourea; sulphur derivatives of guanidine, dipentamethylene thiruram tetrasulphide and tertiary dodecyl mercaptan are also referred to. Phenolic resins specified are phenol-formaldehyde, phenol-acetaldehyde, cresolaldehyde and resorcinol-aldehyde. Suitable backings are cellulosic, e.g. paper, cloth, a laminate of paper plies, cloth plies, or a combination of paper and cloth plies. Abrasive grain may be silicon carbide, garnet and crushed fused alumina. Specification 734,045 is referred to.
Titel: Abrasive article containing an inorganic phosphate

Patentnummer: WO9714534A1


Anmelder: 3M CO MINNESOTA MINING AND MFG

Erfinder: HARMER WALTER L HO KWOK LUN


Zusammenfassung:

Source: US5738695 A [EN] An abrasive article, and methods of making and using same, comprising an inorganic phosphate selected from the group consisting of an alkali metal metaphosphate, an alkaline earth metal metaphosphate, and a Group IIIA metal orthophosphate; the inorganic phosphate may be present in a peripheral coating layer of a coated abrasive article, or an abrasive slurry coating in a uniform thickness, or a structured abrasive article

Datum des Suchlaufs: 07.04.2021

Dokument Nr.: 157
ABRASIVE ARTICLES AND METHOD OF MAKING AND USING THE ARTICLES

Patentnummer: WO2004043650A1

Anmeldung: WO2003US29567
DE20030759316
US20030668757
GB20020205913
AU20030275048
AT20030759316T

Priorität: GB20020025913 20021106
GB20020025913 20021107
EP20030759316 20030923
WO2003US29567 20030923

Patentfamilie: WO2004043650A1
EP1558427B1
EP1558427A1
DE60337566D1
US6951577B2
US2004144037A1
GB2002225913A0
AU2003275048A1
AT514528E

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: CARTER CHRISTOPHER J
WINSPEAR TRACEY E

IPC-Notationen: B24D0003-00
B24D0003-20
B24D0003-28
B24D0003-34
B24D0011-00
B24D0011-02

CPC-Notationen: B24D0003-28
B24D0003-34
B24D0011-00
B24D0018-00

Zusammenfassung:
Source: US2004144037 AA [EN] An abrasive article comprising abrasive particles and a UV-cured formulation and a filler, wherein the filler is substantially transparent to UV-radiation and the filler is present in a range from 20 to 80 percent by weight based on the combined weight of the formulation and filler and the filler comprises microspheres of aluminosilicate ceramic having an average particle size in a range of from 1 micrometer to 40 micrometers. A method of making and using the abrasive articles is also provided

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 158
Titel: PATTERNED COATED ABRASIVE FOR FINE SURFACE FINISHING

Patentnummer: EP0396150B1

Anmeldung: EP19900108486
DE19906033404T
US19890347663
JP19900115928
CA19902015720
AU19900054501
AT19900108486T
BR1990Pi02118
DK19900108486T
ES19900108486T
GR20000400681T
MX19900020599
ZA19900003348

Priorität: US19890347663 19890505
CA19902015720 19900430

Patentfamilie: EP0396150B1
EP0396150A3
EP0396150A2
DE69033404T2
DE69033404D1
US5014468A
JP3073276A2
JP7080123B4
JP2130950C3
CA2015720C
CA2015720A
AU621741B2
AU199054501A1
AT188158E
BR199002118A
DK0396150T3
ES2140371T3
GR3032981T3
MX170957B
ZA9003348A

Anmelder: NORTON CO

Erfinder: AANESUTO EE KOORUMAN
DEIBITSUDO ROSUOUTOKAA
ERNEST A COLEMAN
RAVIPATI SITA R
RAVIPATI SITARAMAIAH
ROSTOKER DAVID
SHITARAMEISHIYU RABIPATEI
SITARAMAISH RAVIPATI
UESUREE AARU KAKUTSUMAREKU
WESLEY R KACZMAREK
YUUJIN ZADOO
ZADOR EUGENE

IPC-Notationen: B24D0003-00
B24D0003-20
B24D0003-28
B24D0003-34
B24D0011-00
B24D0011-04

CPC-Notationen: B24D0003-28
B24D0003-342
B24D0003-00
B24D0003-28
B24D0003-34
B24D0011-00
B24D0011-04
Zusammenfassung:

Source: US5014468 A [EN] Coated abrasive material for fine finishing applications including second fining ophthalmic application, having patterned surface coating of abrasive grains dispersed in radiation-cured adhesive binder. The patterned surface coating is defined by a plurality of formations of such abrasive/binder each having an inner bottom edge defining an area devoid of coated abrasive, a top edge defining a somewhat larger area devoid of coated abrasive and an inner wall connecting the top and bottom edges.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 159
PRODUCTION OF LAYERED ENGINEERED ABRASIVE SURFACES

Source: US2001003884 AA [EN] Coated abrasives comprising shaped structures deposited on a backing can be given increased versatility by varying the composition comprising the structure such that different characteristics are revealed as the structure is eroded during use.
Abrasive article includes a substrate having opposed first and second surfaces, a make coat on at least a portion of the first surface, abrasive mineral particles on at least a portion of the make coat to provide an abrasive surface and a size coat arranged over at least a portion of the abrasive surface, wherein the size coat has a Young's modulus of less than 100,000 psi.
Titel: Abrasive articles including an antiloading composition

Patentnummer: WO9858769A1

Anmeldung: WO1998US11922
EP19980925308
US19970881209
CA19982295100

Priorität: US19970881209 19970624
WO1998US11922 19980610

Patentfamilie: WO9858769A1
EP0991498A1
US5908477A
CA2295100A

Anmelder: MINNESOTA MINING AND MFG

Erfinder: HARMER WALTER L
KINCAID DON H
KIRK ALAN R
LARSON ERIC G

IPC-Notationen: B24D0003-00
B24D0003-20
B24D0003-28
B24D0003-34
B24D0011-00
B24D0018-00

CPC-Notationen: B24D0003-004
B24D0003-28
B24D0003-344
B24D0011-00
B24D0018-00

Zusammenfassung:

Source: US5908477 A [EN] An abrasive article is provided that includes a bond system formed from a binder precursor and about 15 percent by weight or less of a wax-containing modifier. An abrasive article that includes the bond system exhibits an increase of workpiece surface abraded in a Woodsanding Normal Force Test as compared to an abrasive article including a bond system formed from a composition containing substantially no wax-containing modifier.
METHOD OF MAKING A COATED ABRASIVE ARTICLE

Patentnummer: EP0552698B1


Priorität: US19920823861 19920122 US19920970950 19921103 CA19932087804 19930121


Anmelder: 3M CO MINNESOTA MINING AND MFG

Erfinder: EDBLOM ELIZABETH C C O MINNESO MASMAR CRAIG A C O MINNESOTA M MASMAR CRAIG ALAN SPENCER DOUGLAS S C O MINNESOT


Zusammenfassung:
Source: US5368618 A [EN] A method of preparing a coated abrasive article in which the presence of multiple layers of abrasive grains are minimized. In one variation, the method comprises the steps of: (a) providing a backing; (b) applying a make coat precursor to the backing; (c) partially curing the make coat precursor; (d) applying, preferably by projecting, a plurality of abrasive grains into the partially cured make coat precursor; and (e) completely curing the partially cured make coat precursor. In another variation of this method, a size coat precursor is applied over the abrasive grains and cured make coat, and the size coat precursor is completely cured. In another variation of this method, a size coat precursor is applied over the abrasive grains and the partially cured make coat precursor, and the make coat precursor and the size coat precursor are completely cured. The make coat precursor preferably comprises an unsaturated resin that polymerizes via a free radical polymerization mechanism at the site of alpha, beta-unsaturation.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 163
Source: US5039311 A [EN] An erodable abrasive granule comprising a plurality of first abrasive grains bonded together by a first binder to form an erodable base agglomerate and at least a partial coating of second abrasive grains bonded to the periphery of the base agglomerate by means of a second binder. These abrasive granules can be incorporated into a wide variety of abrasive articles such as grinding wheels, coated abrasives, and non-woven abrasives.
Titel: SCENTED ENGINEERED ABRASIVES
Patentnummer: DE10246402B4
Anmeldung: DE20021046402
US20010972317
GB20020023092
FR20020011896
Priorität: US20010972317 20011005
Anmelder: SAINT GOBAIN ABRASIVES INC
SAINT GOBAIN ABRASIVES TECH CO
SAINT GOBAIN ABRASIVES TECHNOL
SAINT GOBAIN SA
Erfinder: DENES AMERICO GEZA
KINISKY THOMAS G
SWEI SHIN GWO
IPC-Notationen: B24D0003-00
B24D0003-20
B24D0003-28
B24D0003-34
B24D0011-00
C11B0009-00
CPC-Notationen: B24D0003-34
B24D0011-00
Zusammenfassung:
Source: US6395044 BA [EN] The invention provides coated abrasives with an engineered surface that releases a pleasing fragrance when used.
**Titel:** LIQUID RESIN COMPOSITION FOR **ABRASIVE** ARTICLES

**Patentnummer:** WO2009053581A1

**Anmeldung:**
- WO2008FR51779
- EP20080843140
- US20120711107
- US20080681252
- FR20070006880
- CN200880118616
- TW20080137765
- AR2008P104283
- CL20080002930
- TH20081005057

**Priorität:**
- FR20070006880 20071001
- WO2008FR51779 20081001
- US20100681252 20100709
- US20120711107 20121211

**Patentfamilie:**
- WO2009053581A1
- EP2195142A1
- US8690978B2
- US2013091778A1
- US2010270495A1
- FR2921667B1
- FR2921667A1
- CN101883664A
- CN101883664B
- TW200932797A
- TW14789658
- AR068642AA
- CL52069B
- CL2008002930A1
- TH109696A

**Anmelder:**
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- ESPIARD PHILIPPE
- POZZOLO SANDRINE
- SAINT GOBAIN ABRASIFS TECH ET SERVICES S A S
- SAINT GOBAIN ABRASIVES INC

**Erfinder:**
- ARNAUD ALEX
- ARNAUD ALIX
- PHILIPPE ESPIARD
- SANDRINE POZZOLO
Zusammenfassung:

Source: US2010270495 AA [EN] The invention relates to a thermally curable liquid resin composition intended for manufacturing abrasives that comprises at least one epoxy resin comprising at least two epoxy groups and at least one reactive diluent, said composition having a viscosity, at 25 degrees centigrade, less than or equal to 7000 mPa.s. Application of the resin composition for producing abrasive articles, especially bonded abrasives and coated abrasives. It also relates to the abrasive articles comprising abrasive grains connected by such a liquid resin composition.
Titel: RESIN BONDED METAL-COATED DIAMOND OR CUBIC BORON NITRIDE ABRASIVE TOOLS CONTAINING AN INORGANIC CRYSTALLINE FILLER AND GRAPHITE

Patentnummer: DE2056820A1

Anmeldung: DE19702056820
DE19700442700U
US19690876655
JP19700100632
GB19700053827
FR19700040876
00000000
19701113
ES19700385553
IE19700001464
NL19700016644
SE19700015458
ZA19700007702

Priorität: US19690876655 19691114

Patentfamilie: DE2056820A1
DE7042700U
US3664819A
JP48018191B4
GB1278184A
FR2069455A5
BE758964A1
BE758964A
CH546627A
ES385553A1
IE34735L
IE34735B
NL148525B
NL7016644A
SE373563C
SE373563B
ZA7007702A

Anmelder: NORTON COMPANY WORCESTER MASSACHUSETTS VERST V AM
NORTON CY 1 NEW BOND STREET WORCESTER MASSACHUSETT

Erfinder: COHEN H M
COHEN HARVEY M
SIOUI R H
SIOUI RICHARD H

IPC-Notationen: B24D0003-00
B24D0003-20
B24D0003-28
B24D0003-34

CPC-Notationen: B24D0003-344
C09K0003-144S
C09K0003-14

Zusammenfassung:

Source: US3664819 A [EN] ABSTRACT OF THE DISCLOSURE Organic bonded diamond or cubic boron nitride abrasive tools, showing particular utility in the dry grinding of metal-carbides, and tool steels, respectively, are produced by incorporating graphite, of fine particle size, and a reinforcing filler in the bond, and by employing metalclad abrasive grits in the amount of 7 to 40%, by volume, of the abrading portion of the tool. The graphite is preferably of a flaky shape having an average diameter of less than 300 microns, and is present in the bond in the amount of from 5 to 40 volume percent, with the total filler content being from 15 to 70%; the remaining filler being, preferably, silicon carbide. FIELD OF THE INVENTION This invention relates to organic bonded diamond and cubic boron nitride abrasive tools, such as grinding wheels, for grinding hard materials such as cemented carbides and tool steels. B
Zusammenfassung:
Source: EP0480133 A2 [EN] Organically bonded abrasive articles comprising seeded sol gel alumina filamentary abrasive particles have high dry grinding performance when the particles have silicon-enriched surfaces

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 168
Zusammenfassung:

Source: US5344688 A [EN] A coated abrasive article comprising (a) a porous backing having a front side and a back side; (b) in direct contact with the porous backing, a make coat formed from a composition comprising a radiation curable adhesive applied over the front side of the backing; (c) a multiplicity of abrasive grits bonded by the make coat to the front side of the backing; and (d) a size coat overlying both the abrasive grits and the make coat. The invention also involves several methods for preparing the coated abrasive article. In all of these methods, a radiation curable make coat precursor is applied directly to the front side of the porous backing. No treatment coat is required to seal the backing prior to application of the make coat precursor.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 169
Titel: STRUCTURED ABRASIVE WITH PARABOLIC SIDES

Patentnummer: WO2005035195A1

Anmeldung: WO2004US23944
EP20040779148
DE200460019950T
US20030668736
JP20060527968T
CN200480034366
KR20067007689
AT20040779148T
BR2004PI14635

Priorität: US20030668736 20030923
WO2004US23944 20040727

Patentfamilie: WO2005035195A1
EP1670616B1
EP1670616A1
DE602004019950D1
US7267700B2
US2005060946A1
JP4555295B2
JP2007505753T2
CN1882420A
CN1882420B
KR20060061386A
KR101085771B1
AT424970E
BRPI0414635A

Anmelder: 3M INNOVATION CO LTD
3M INNOVATIVE PROPERTIES COMPANY

Erfinder: COLLINS STANLEY B HAAS JOHN D

IPC-Notationen: B24D0003-00
B24D0003-20
B24D0003-28
B24D0011-00
B24D0011-06
B24D0018-00

CPC-Notationen: B24D0003-28
B24D0011-005
B24D0018-0009

Zusammenfassung:
Source: US2005060946 AA [EN] An abrasive article and methods of making and using the same are disclosed. The abrasive article includes a plurality of features on a backing. The features have a base and a body. The body is defined by sidewalls having parabolic sections. In some embodiments, the sidewalls are defined by a series of inner-connected lines segments approximating a parabolic section.
COMPOSITIONS FOR ABRASIVE ARTICLES

Patentnummer: WO2005035196A1

Anmeldung: WO2004US24136
            EP20040779269
            DE200460014395T
            US20030668753
            JP20060527970T
            CN200480034365
            KR20067005784
            AT20040779269T
            BR2004PI14650
            ES20040779269T

Priorität: US20030668753 20030923
            WO2004US24136 20040727

Patentfamilie: WO2005035196A1
                EP1675707B1
                EP1675707A1
                DE602004014395D1
                US7300479B2
                US2005060947A1
                JP4634368B2
                JP2007505755T2
                CN1882419A
                CN100493850C
                KR20060098367A
                KR101101454B1
                AT398000E
                BRPI0414650A
                ES2308246T3

Anmelder: 3M INNOVATIVE PROPERTIES COMPANY

Erfinder: MCARDLE JAMES L CULLER SCOTT R

IPC-Notationen: B24D0003-00
                B24D0003-20
                B24D0003-28
                B24D0001-00
                B24D0018-00
                C04B0035-10

CPC-Notationen: B24D0003-002
               B24D0003-028
               B24D0011-005
               B24D0018-009

Zusammenfassung:

Source: US2005060947 AA [EN] A structured abrasive article, methods of making an abrasive article, and methods of using an abrasive article. The abrasive composites forming the abrasive article have a height of at least 500 micrometers, and the abrasive particles in the composites have an average particle size of at least 40 micrometers, in some embodiments, at least about 85 micrometers. The large topography composites, together with the large ceramic abrasive particles, provides an abrasive article that has a more consistent cut, a longer cutting life, and a more consistent surface finish than conventional make/coat abrasive articles with the same size and type of abrasive particles. Additionally, the large topography composites, together with the large ceramic abrasive particles, provide an abrasive article that has a more consistent cut, a longer cutting life, and a more consistent surface finish than structured abrasive articles having a smaller topography, even with the same abrasive particles.
Title: ABRASIVE ARTICLE COMPRISING ABRASIVE PARTICLES OF A COMPOSITE COMPOSITION

Patentnumber: WO2014081828A1


Anmelder: SAINT GOBAIN ABRASIFS SA
SAINT GOBAIN ABRASIVES INC

Erfinder: ALEJANDRO J MANTECON TORRES
BONNER ANNE M
COLLIN ANDRE
LI LING YU
LINGYU LI
MANTECON TORRES ALEJANDRO JAVIER
MATSUMOTO DEAN S
MUTHU JEEVANANTHAM
PIOTR MIZIAK
STEFANO FRANCOVIGH


Zusammenfassung:
Source: US2014137482 AA [EN] An abrasive article has a body including an abrasive portion with a bond material, abrasive particles contained in the bond material, and a reinforcing member contained in the body. The abrasive portion can have a fracture propagation toughness WOF of at least about 5 kJ/m². The reinforcing member can have openings with an open area of not greater than about 100 mm² within a major plane of the reinforcing member.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 172
RESIN BONDED-ABRASIVE ARTICLE HAVING MULTIPLE COLORS

Titel: RESIN BONDED-ABRASIVE ARTICLE HAVING MULTIPLE COLORS
Patentnummer: WO2018118596A3
Anmeldung: WO2017US66162
EP20170884242
US20170472245
JP20190534261T
CN201780079915
KR20197018169

Priorität: US20160437849P 20161222
US20170472245 20171213
WO2017US66162 20171213

Patentfamilie: WO2018118596A3
WO2018118596A2
EP3558588A4
EP3558588A2
US2019322915A1
JP2020514082T2
CN110087833A
KR20190089931A

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Erfinder: GIVOT MAIKEN
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KIM NAMHYUK
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MORIS ALICE B
VAN LOC XUONG

IPC-Notationen: B24D0003-00
B24D0003-20
B24D0007-02
B24D0007-14
B24D0018-00
B24D0099-00
C09K0003-14

CPC-Notationen: B24D0003-20
B24D0007-14
B24D0018-0009
B24D0099-00
C09K0003-1409
C09K0003-1436

Zusammenfassung:
Source: US2019322915 AA [EN] Various embodiments disclosed relate to a composite abrasive article. The article can be formed from a first portion having a first color and a second portion of the article having a second color different than the first color

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 173
Zusammenfassung:
Source: US2020061777 AA [EN] With a method for the production of a **grinding tool**, a **tool** base body is provided, which configures a three-dimensionally shaped adhesive sur-face by application of a bonding agent. The **tool** base body is positioned in a way that the adhesive surface is arranged in an electrostatic field, be-tween a first electrode and a second electrode. Into the electrostatic field, **abrasive** grains are introduced, which, due to the electrostatic field, move towards the adhesive surface and adhere to same. The **grinding tool** produced in this manner has a three-dimensionally shaped **abrasive** grain layer. The production of the **grinding tool** is simple, flexible and economical. The **grinding tool** has a randomly shaped **abrasive** grain layer and can be applied in a manifold manner with a high **cutting** performance and a long **service life**
Titel: CURABLE COMPOSITION, ABRASIVE ARTICLE, AND METHOD OF MAKING THE SAME

Patentnummer: WO2017192426A1
Anmeldung: WO2017US30353
EP20170737926
US2017099031
JP20180558122T
CN201780027803
KR20187034676

Priorität: US20160332908P 20160506
US20170099031 20170501
WO2017US30353 20170501

Patentfamilie: WO2017192426A1
EP3452253B1
EP3452253A1
US10702974B2
US2019185658A1
JP2019520222T2
CN109070314A
CN109070314B
KR20190004744A

Anmelder: 3M INNOVATIVE PROPERTIES CO
Erfinder: LEE HAE SEUNG
SCHILLO ARMSTRONG MELISSA C

IPC-Notationen: B24D0003-00
B24D0003-28
B24D0003-34
B24D0005-12
C08K0003-22
C08K0005-544
C08K0009-02
C08K0009-06
C08L0061-06
C09K0003-14

CPC-Notationen: B24D0003-28
B24D0003-34
B24D0005-12
C08K0003-22
C08K0005-544
C08K0009-02
C08K0009-06
C08K2003-2227
C08K2201-009
C08L0061-06
C08L0073-00

Zusammenfassung:

Source: US2019185658 AA [EN] A curable composition comprises a phenolic resin and isocyanate-functionalized abrasive particles. The isocyanate-functionalized abrasive particles consist of the reaction product of at least one isocyanate-functional organosilane and abrasive particles. Abrasive articles and methods of making them using the isocyanate-functionalized abrasive particles are also disclosed.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 175
Abrasive Article and Method of Making the Same

Source: US2017129075 A1

An abrasive article comprises abrasive particles adhered to a substrate by a binder material comprising an at least partially cured resole phenolic resin and an aliphatic tack modifier. The amount of resole phenolic resin comprises from 60 to 98 weight percent of the combined weight of the resole phenolic resin and the aliphatic tack modifier. A method of making the abrasive article is also disclosed.
Source: US2019224813 AA [EN] An abrasive article can include a body including a bond material and abrasive particles contained within the bond material. The bond material can include an organic material including a resin, particularly a phenolic resin. A methylene bridge can be present at para or ortho sites of aromatic phenolic rings. The bond material can include an average ortho to para substituent ratio for the methylene bridge within a range including at least 1.5:1 and not greater than 9:1, particularly, within a range including at least 3 and not greater than 6.9.
Zusammenfassung:
Source: US2019262974 AA [EN] In some examples, an abrasive particle transfer system including a production tool comprising a dispensing surface and a back surface opposite the dispensing surface, wherein the production tool has cavities formed therein, wherein, on a respective basis, each of the cavities extends from a first opening at the dispensing surface through the production tool to a second opening at the back surface, and wherein the second opening is smaller than the first opening; abrasive particles removably disposed within at least some of the cavities such that a portion of each particle protrudes from the back surface through the second opening; and a transfer roll having an outer surface, wherein the production tool is guided along a web path such that the portion of the abrasive particles protruding from the back surface of the production tool contacts the outer surface of the abrasive particle transfer roll to displace the abrasive particles.
Title: Grinding wheel manufacturing method

Patent number: DE3316650C2

Application: DE1983316650
US19830492826
JP19820077733
GB19830012440
FR19830007812

Priority: JP19820077733 19820510

Patent family: DE3316650C2
DE3316650A1
US4618349A
JP58223564A2
JP205319684
JP1698390C3
GB2121330B2
GB2121330A1
GB8312440A0
FR2526353B1
FR2526353A1

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OSAKA KONGO SEITO KK
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TOKYO SHIBAURA ELECTRIC CO

Inventor: HASHIMOTO MASAHIRO
TANI HIDEO

IPC Notation: B24D0003-00
B24D0003-30

CPC Notation: B23H0005-08
B24D0003-02
B24D0003-34
B24D0005-00
B24D0018-00
C09K0003-1436

Summary:
Source: US4618349 A [EN] A grinding wheel comprising abrasive grains each of which is coated with a conductive material and a non-conductive binder interposed among said abrasive grains. The amount of said conductive material ranges from 30 to 80 percent by weight based on said abrasive grains. The abrasive grains coated with said conductive material is contained in said grindstone in an amount ranging from 33 to 64 percent by volume. A method of producing said grinding wheel is also proposed. The method comprises preparing a mixture of said coated abrasive grains and said non-conductive binder, filling the mixture into a mold and molding said mixture by applying a pressure while maintaining said mixture at a constant temperature.

Date of Search: 07.04.2021
Document No.: 179
Zusammenfassung:

Source: US5092082 A [EN] Laminated *grinding disks* are *built* up in layers with the interposition of at least one layer of vibration-damping materials as sound insulation, the layer of vibration-damping materials being placed in the mold in the form of fine, free-flowing powder and/or granules. The powder or granules can consist of elastomers which can withstand heating to more than 110 DEG C. The elastomer can be mixed with synthetic resin. The addition of *filler* improves the working qualities of the mixture and improves its granulability.
<table>
<thead>
<tr>
<th>Title:</th>
<th>ABRASIVE MATERIAL AND ABRASIVE WHEEL</th>
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<tr>
<td>Patent Number:</td>
<td>EP2653265B1</td>
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<tr>
<td>Application:</td>
<td>EP2012002759 US20130864626 ES2012002759T</td>
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<tr>
<td>Priority:</td>
<td>EP2012002759 20120420</td>
</tr>
<tr>
<td>Applicant:</td>
<td>DAMRAU DIRK OLAF DOPP STEPHAN HERMES SCHLEIFMITTEL GMBH AND CO KG</td>
</tr>
<tr>
<td>Inventors:</td>
<td>DAMRAU DIRK OLAF DOPP STEPHAN</td>
</tr>
<tr>
<td>IPC Notation:</td>
<td>B24D0003-00 B24D0003-34 B24D0005-06 C09K0003-14</td>
</tr>
<tr>
<td>CPC Notation:</td>
<td>B24D0003-00 B24D0003-34 B24D0005-063</td>
</tr>
</tbody>
</table>

**Zusammenfassung:**

Source: US2013280995 AA [EN] The invention relates to an abrasive having a base body and abrasive particles applied to the surface of the base body, characterized in that the base body has a multicellular structure. The invention further relates to a process for producing this abrasive and to a grinding tool based on this abrasive.
Titel: SANDPAPER WITH NON-SLIP COATING LAYER
Patentnummer: WO2018071361A1
Anmeldung: WO2017US55832
EP20170859665
US20170340554
CA20173040112
CN201780062657
Priorität: US20160406148P 20161010
US20170340554 20171010
WO2017US55832 20171010
Patentfamilie: WO2018071361A1
EP3523092A1
EP3523092A4
US2019255677A1
CA3040112A
CN109803791A
Anmelder: 3M INNOVATIVE PROPERTIES CO
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BUCHHOLZ BRETT A
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MARTIN MICHAEL C
PEITERSEN JOHN G
IPC-Notationen: B24D0003-00
B24D0003-34
B24D0009-00
B24D0011-00
B24D0011-02
B24D0011-08
CPC-Notationen: B24D0003-002
B24D0003-346
B24D0009-00
B24D0011-00
B24D0011-02
B24D0011-08

Zusammenfassung:
Source: US2019255677 AA [EN] The present disclosure generally relates to abrasive articles for abrading a work surface such as, for example, flexible sheet-like abrasive articles, as well as methods of making and using such abrasive articles. Some embodiments of the abrasive articles include an improved, more heat resistant non-slip coating or layer.
Source: US4988554 A [EN] A coated abrasive article comprising a backing bearing on one major surface thereof a layer of abrasive grains overcoated with a loading resistant coating and on the other major surface thereof a layer of pressure-sensitive adhesive. The loading resistant coating comprises a lithium salt of a fatty acid. It may also contain additives selected from the group consisting of surfactants, wetting agents, binders, anti-foaming agents, fillers, plasticizers, and mixtures thereof. The use of a lithium salt of a fatty acid significantly reduces the amount of transfer between the loading resistant coating of a first coated abrasive article and the pressure-sensitive adhesive layer of a second coated abrasive article disposed within a package.
Title: METHOD OF FABRICATING A REINFORCED MEDIUM FOR ABRASIVE-COATED GRINDING MATERIAL, AND ABRASIVE-COATED GRINDING MATERIAL OBTAINED THEREFROM

Patentnummer: WO2009071842A3

Anmeldung: WO2008FR52133
EP20080856949
US20080742193
JP20100534532T
FR20070059312
CA20082706361
CN200880117488
KR20107011278
BR2008PI20396

Priorität: FR20070059312 20071126
WO2008FR52133 20081126

Patentfamilie: WO2009071842A3
WO2009071842A2
EP2227354A2
US2010279061A1
JP2011504423T2
FR2924041B1
FR2924041A1
CA2706361A
CN101873911A
KR20100106318A
BRPI0820396A2

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MAYADE THIERRY

Erfinder: THIERRY MAYADE

IPC-Notationen: B24D0003-00
B24D0003-34
B24D0011-00
B24D0011-02
B24D0018-00
B32B0005-00
D21F0001-00
D21H0013-00
D21H0017-28
D21H0017-35
D21H0017-53
D21H0017-55
D21H0023-00

CPC-Notationen: B24D0003-002
B24D0003-34
B24D0011-003
B24D0011-002
B24D0018-0072
D21H0017-28
D21H0017-35
D21H0017-53
D21H0017-55
D21H0019-36
D21H0021-16
Y10T0428-24132
Y10T0428-24364
Y10T0428-24785
Y10T0428-2481

Zusammenfassung:

Source: US2010279061 AA [EN] The present invention relates to a machine for fabricating a medium for abrasive-coated grinding material, wherein at least one continuous reinforcing element in the form of a tape or a yarn is introduced continuously during wet formation of the medium.
Source: US2019015950 AA [EN] Provided are abrasive articles that include a plurality of layers, in the following order: a backing; an abrasive layer; and a supersize coat. The supersize coat contains a metal salt of a long-chain fatty acid and clay particles dispersed therein. Advantageously, the clay particles enhance the optical clarity of the supersize coat, allowing printed abrasive articles to be made with thicker supersize coatings. The addition of clay was also found to improve cut performance of the abrasive article relative to articles in which the clay particles are absent.
Title: MULTIPURPOSE TOOLING FOR SHAPED PARTICLES

Patentnummer: WO2018063962A1

Anmeldung: WO2017US53173
EP20170857247
US20170331279
CN201780059785

Priorität: US20160402571P 20160930
US20170331279 20170925
WO2017US53173 20170925

Patentfamilie: WO2018063962A1
EP3519138A1
EP3519138A4
US2019351531A1
CN109789535A
CN109789535B

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NELSON THOMAS J
WOO EDWARD J

IPC-Notationen: B24D0003-00
B24D0003-34
B24D0011-00
B24D0018-00
B29C0047-00
B29C0048-03
B29D0028-00
B81C0001-00
C09K0003-14

Zusammenfassung:

Source: US2019351531 AA [EN] A method of transferring a shaped particle to a substrate includes providing a scrim of at least two elongate strands periodically joined together at flexible bond regions to form an array of apertures between the strands. The scrim is extended along at least one direction to increase the minimum dimension of the apertures. Shaped particles are applied to the extended scrim and at least a portion of the shaped particles enter in at least some of the apertures therein. The extended scrim is relaxed and frictionally retains the particles between the elongate strands. The particle loaded scrim is extended along at least one direction to release and transfer the shaped particles to the substrate in a predetermined orientation.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 186
Zusammenfassung:

Source: US2002146963 AA [EN] Composition comprising at least about 25 percent by weight graphite particles, based on the total solids content of the composition. The composition is useful, for example, as a coating on the backside of coated abrasive articles.
Zusammenfassung:
Source: WO14206739 A1 [EN] The invention relates to a grinding element (10, 110, 210) with a main part (12, 112, 212) which comprises at least one base material (14, 114, 214). The main part (12, 112, 212) comprises at least one additional active material (16, 116, 216) which is provided in order to at least partly influence at least one machining parameter at least in an operating state.
Source: US2019344402 AA [EN] In some examples, an abrasive particle transfer system including a production tool including a dispensing surface with a plurality of cavities formed therein; abrasive particles removably disposed within at least some of the cavities; and a nonwoven substrate having an outer surface opposing the dispensing surface of the production tool, wherein the dispensing surface of the production tool is configured to apply a compressive force to the outer surface of the nonwoven substrate to compress the nonwoven substrate from a first thickness to a second thickness, wherein, while the nonwoven substrate is compressed to the second thickness by the production tool, the abrasive particles are transferred from the plurality of cavities to the nonwoven substrate.
Title: COATED ABRASIVE ARTICLE WITH TIE LAYER, AND METHOD OF MAKING AND USING THE SAME

Patentnummer: WO2006006999A1

Anmeldung: WO2005US13087
EP20050741860
DE200560005682T
US20040871455
JP20070516476T
CA20052569870
CN200580019719
KR20067026516
AT20050741860T
BR2005PI12059

Priorität: US20040871455 20040618
WO2005US13087 20050419

Patentfamilie: WO2006006999A1
EP1776209B1
EP1776209A1
DE602005005682T2
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US7150770B2
US2005279028A1
JP4782783B2
JP2008502492T2
CA2569870A
CN1968786A
CN100522488C
KR20070027586A
KR101106912B1
AT390247E
BRPI0512059B1
BRPI0512059A

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: KEIPERT STEVEN J THURBER ERNES
KINCAID DON H
PROVOW RONALD D
THURBER ERNEST L

IPC-Notationen: B24D0003-00
B24D0003-004
B24D0011-00
B24D0011-001
B24D0017-00
B24D0018-00
B24D0099-00
B24D0099-00

CPC-Notationen: B24D0003-28
B24D0003-28
B24D0011-001
B24D0011-001

Zusammenfassung:
Source: US2005279028 AA [EN] Coated abrasive articles have a tie layer that is preparable by at least partially polymerizing an isotropic polymerizable composition comprising a polyfunctional aziridine, an acidic free-radically polymerizable monomer, and an oligomer having at least two pendant free-radically polymerizable groups, wherein homopolymerization of the oligomer results in a polymer having a glass transition temperature of less than 50 degrees Celsius

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 190
COATED ABRASIVE ARTICLE WITH COMPOSITE TIE LAYER, AND METHOD OF MAKING AND USING THE SAME

Patentnummer: WO2006007036A1
Anmeldung: WO2005US15217
             EP20050744013
             DE200560005681T
             US20040871486
             JP20070516486T
             CA20052570302
             CN200580020204
             KR20077001212
             AT20050744013T
             BR2005PI12141
Priorität: US20040871486 20040618
            WO2005US15217 20050503
Patentfamilie: WO2006007036A1
            EP1773544B1
            EP1773544A1
            DE602005005681T2
            DE602005005681D1
            US7150771B2
            US2005279029A1
            JP4728326B2
            JP2008502772T2
            CA2570302A
            CN1968787A
            CN100509291C
            KR20070032019A
            KR101106843B1
            AT390246E
            BRPI0512141B1
            BRPI0512141A
Anmelder: 3M INNOVATIVE PROPERTIES CO
Erfinder: KEIPERT STEVEN J THURBER ERNEST L
          KINCAID DON H
          PROVOW RONALD D
          THURBER ERNEST L
IPC-Notationen: B24D0003-00
                B24D0003-004
                B24D0011-00
                B24D0017-00
                B24D0018-00
                B24D0099-00
                C08F0002-00
                C08F0290-00
                C08J0005-14
CPC-Notationen: B24D0003-28
                 B24D0003-00
                 B24D0011-001
Zusammenfassung:

Source: US2005279029 AA [EN] Coated abrasive articles have a composite tie layer. The composite tie layer is preparable by disposing a first polymerizable composition comprising a polyfunctional aziridine on a backing, and disposing a second polymerizable composition comprising at least one acidic free-radically polymerizable monomer and at least one oligomer having at least two pendant free-radically polymerizable groups on the first polymerizable composition, at least partially polymerizing the first and second polymerizable compositions, wherein homopolymerization of the oligomer results in a polymer having a glass transition temperature of less than 50 degrees Celsius.
METHOD FOR MAKING A SUBSTRATE FOR AN APPLIED ABRASIVE PRODUCT AND SUBSTRATE THUS OBTAINED

Source: WO09030850 A2 [EN] The invention relates to a method for making a substrate for an applied abrasive product that comprises applying a treatment for making at least one area of at least one face of the substrate water-repellent for an attachment layer of abrasive grains.
Titel: METHOD FOR PRODUCING CURRENT ENDS SCHLEIFKOERPERN (Machine translation)

Patentnummer: DE612918A

Anmeldung: DE1931D060530D 00000000

Priorität: 19310227

Patentfamilie: DE612918A NL40248C

Anmelder: DEGUSSA

Erfinder: POHL DR THEODOR SCHNEIDER JOSEF

IPC-Notationen: B24D0003-00 B24D0018-00

CPC-Notationen: B24D0003-00 B24D0018-00

Zusammenfassung:

Die Erfindung bezieht sich auf die Herstellung umlaufender Schleifkörper von starker Beschaffenheit aus Schleifmaterial, wie Schmirgel, Korund, Siliciumcarbid u. dgl., und Bindemitteln. Derartige Schleifkörper besitzen stets eine gewisse natürliche Porosität, welche bedingt durch die Größe des Schleifkorns, die Art des verwendeten Schleifkorns, das Mengenverhältnis von Schleifkorn und andere bedingte Schleifkorns ist. Es ist auch bereits vorgeschlagen worden, die Porosität von aus Schleifkorn und Bindemitteln hergestellten Schleifkörpern künstlich zu erhöhen, z. B. derart, daß man der Mischung der Ausgangsstoffe Holzmehl u. dgl. Zusatzstoffe einverleibt und durch Ausbrennen derselben aus dem geformten Körper die Porosität des Fertigproduktes erhöht. Also schlägt z. B. die USA-Patentschrift 1 573 400 vor,0 zu erhöhen

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 193
Zusammenfassung:

Source: US5143522 A [EN] An abrasive grain comprising about 20 to about 50 percent by weight of zirconia; reduced titania in an amount on analysis expressed as titanium dioxide of 1.5 to about 10 percent by weight; total carbon in an amount of 0.03 to about 0.5 percent by weight; impurities, if any, in a total amount on analysis expressed as the oxides of not greater than 3 percent by weight; and a balance of alumina. The microstructure of the abrasive grain comprises primary alumina or zirconia crystals embedded in a supporting alumina-zirconia eutectic matrix. The grain may be produced by combining and melting the alumina and zirconia; adding titania and carbon (excess carbon being required); melting and reducing the titania under reducing furnace conditions; and solidifying the melt in under three minutes by means of a suitable heat sink material. The abrasive grain has a high proportion of tetragonal zirconia and may be used to produce coated abrasive products or bonded abrasive products.
Title: Vitrified super abrasive grain grinding tool

Patentnumber: US5095665A

Application: US19890367510
JP19880146752

Priority: JP19880146752 19880616

Patent family: US5095665A
JP1316174A2
JP7016881B4
JP2130108C3

Applicant: NORITAKE CO LTD

Inventors: NAGATA AKIRA
YOGO TAKAO

IPC-Notation: B24D0003-02
CPC-Notation: B24D0003-14
B24D0003-346

Summary:
Source: US5095665 A [EN] Vitrified super abrasive grain grinding tool comprised of abrasive grains and first and second fillers bonded together by a vitrified bonding material, wherein the abrasive grains are super abrasive grains, the softening points of the first and second fillers are both higher than an inherent firing temperature of the vitrified bonding material for the super abrasive grains, the first filler is a ceramics which maintains a hollow state before and after firing of the bonding material, and the second filler is a ceramics which exists in a non-hollow state. This grinding tool has a high porosity at a low concentration while utilizing excellent grinding characteristic of super abrasive grains with high grain retention force and little burn mark in dry grinding.

Search date: 07.04.2021
Document No.: 195
GLASS BONDED ABRASIVE TOOL CONTAINING METAL CLAD GRAPHITE

Patentnummer: DE3121435A1

Anmeldung: DE19813121435
US19800154359
US19800154356
JP198001074073
JP19800123563
GB19810011407
FR198001010712
CA19810372318
AU19810069462
AT19810001941
BE19810204916
BR19810003305
CH19810002980
IT19810067462
MX19810187359
SE19810003284

Priorität: US19800154356 19800529
US19800154359 19800529
CA19810372318 19810304

Patentfamilie: DE3121435A1
DE3120947A1
US4354247A
US4334895A
JP57021271A2
JP57010123A2
GB2077285B2
GB2077285A1
FR2483296B1
FR2483296A1
CA1178067A1
AU537562B2
AU198169462A1
AT373814B
AT194181A
BE888980A
BR8103305A
CH640166A
IT1143482A
IT8167462A0
MX156056A
SE8103284L
SE450099C
SE450099B

Anmelder: NORTON CO
ROCKWELL INT CORP
ROCKWELL INTERNATIONAL CORP

Erfinder: KEAT PAUL POWELL
POORU PII KIITO
SHI KEI YAO
YAO SHI KAY
Zusammenfassung:

Source: US4334895 A [EN] Glass bonded grinding wheels including graphite or other inert dry film lubricant filler can be made by conventional techniques if the filler material is protected from oxidation by a metal cladding. Diamond or cubic boron nitride wheels are particularly described and high grinding ratios are achieved. Low porosity can be achieved because of the wettability of the metal cladding by the glass during firing.
Zusammenfassung:

Source: US2020086458 AA [EN] Various embodiments disclosed relate to an abrasive article. The abrasive article includes a first major surface and an opposed second major surface. Each major surface contacts a peripheral side surface. A central axis extends through the first and second major surfaces. A first layer of abrasive particles is dispersed within the abrasive article according to a first predetermined pattern. Further a second layer of abrasive particles spaced apart from the first layer of abrasive particles and is dispersed within the abrasive article along a according to a second predetermined pattern. A binder material retains the first and second layers of abrasive particles in the abrasive article. A portion of the binder material is located between the first and second layers of abrasive particles. That portion of the binder material is substantially continuous.
**Title:** Abrasive composites having a controlled rate of erosion, articles incorporating same, and methods of making and using same

**Patent Number:** EP0605008B1

**Application:**
- EP19930121124
- DE19936009420T
- US19940252418
- US19920999097
- JP19930327359
- CA19932107955
- KR199300331224
- AT19930121124T
- ES19930121124T

**Priority:**
- US19920999097 19921231
- CA19932107955 19931007
- US19940252418 19940601

**Patent Family:**
- EP0605008B1
- EP0605008A1
- DE69309420T
- DE69309420D1
- US518512A
- US534219A
- JP6206167A2
- CA2107955A
- KR940013731A
- KR19940013731A
- AT150999E
- ES2099895T3

**Inventors:**
- HIBBARD LOUIS D CO
- MINNESOTA MINING AND MFG

**IPC Notations:**
- B24D0003-02
- B24D0003-20
- B24D0003-28
- B24D0003-34
- B24D0011-00
- C08K0003-00
- C08K0003-34

**Summary:**
Source: US5342419 A [EN] An abrasive composite is presented having a controlled rate of erosion, the composite comprising abrasive particles dispersed in the binder, wherein the binder comprises an addition polymerized resin having clay particles dispersed therein. The abrasive composite may be adhered to various substrates, including paper, cloth, polymeric films, and nonwovens. The clay particles allow the binder, and thus the composite, to controllably erode upon abrasion of a workpiece, thus exposing fresh abrasive particles to the workpiece. Coatable compositions comprising clay particles dispersed in a binder precursor composition, and optionally containing abrasive particles, are also described, as well as methods of making and using the composites and articles.

**Date of Search:** 07.04.2021

**Document No.:** 198
Zusammenfassung:

Source: US6261682 BA [EN] An abrasive article comprising a backing, a plurality of abrasive particles, a binder which adheres the abrasive particles to the backing, and a peripheral coat including an antiloading component is provided. The antiloading component is of the formula \((C_nH_{2n+1})\ --COO--M\), wherein \(n\) is greater than 17 and \(M\) is selected from Group 1 of the Periodic Table, with the proviso that when \(M\) is lithium, \(n\) is greater than 21. The antiloading component can be included in a coated abrasive article, such as a lapping or structured abrasive article, and a nonwoven abrasive article.
Source: US4918116 A [EN] Improved high temperature resistant molding materials containing customary filler materials and additives and a carbon forming bonding agent which is a phenol novolac with a molar ratio of phenol to formaldehyde of 1 to 0.2 to 1 to 0.35 of high quality and free of solvents useful as refractory products, carbon materials, abrasive wheels, friction lining and the like.
Titel: METHOD OF MANUFACTURING GRINDING WHEELS AND THE LIKE
Patentnummer: US3377411A
Anmeldung: US19640348735 ES19610272672
Priorität: ES19610272672 19611204 US19640348735 19640302
Patentfamilie: US3377411A ES272672A1
Anmelder: OSBORN MFG CO THE OSBORN MANUFACTURING COMPANY
Erfinder: CHARVAT VERNON KENNETH

IPC-Notationen: B24D0003-02 B24D0005-00 B24D0018-00 B29C0041-04 B29C0044-04

Zusammenfassung:
Source: US3377411 A [EN] [Source: Claim 1] 1. The method of forming an abrasive article which comprises mixing discrete abrasive particles in a foammble binder medium, centrifuging the resultant mixture in a rotatable mold to concentrate said particles in a radially outer local region of said mold and then foaming said centrifuged mixture to produce cells to space substantially all of said concentrated particles only slightly uniformly apart, and setting said binder
Zusammenfassung:
Source: US4799939 A [EN] Erodable agglomerates containing individual abrasive grains disposed in an erodable matrix comprising hollow bodies and a binder. The agglomerates are useful for coated abrasives and bonded abrasives. Abrasive products containing the agglomerates provide higher stock removal than abrasive products bearing a single layer of abrasive grains, since the erodable character of the agglomerates allows the sloughing off of spent individual abrasive grains during abrading operations and the exposing of new abrasive grains to the workpiece. The invention also provides a method of preparing the agglomerates of this invention.
Titel: Grinding wheel  
Patentnummer: DE3537792A1  
Anmeldung: DE19853537792  
US19850782695  
JP19840225200  
GB19850025873  
FR19850015733  
Priorität: JP19840225200 19841026  
Patentfamilie: DE3537792A1  
US4654051A  
JP61103778A2  
GB2168992B2  
GB2168992A1  
GB8525873A0  
FR2572322A1  
Anmelder: TOHOKU CHEMICAL IND LTD  
TOHOKU KAKO KK  
Erfinder: ORITA KEICHI  
YAMASHITA AKIRA  
IPC-Notationen: B24D0003-02  
B24D0003-30  
B24D0003-34  
C08J0005-14  
CPC-Notationen: B24D0003-30  
B24D0003-34  

Zusammenfassung:  
Source: US4654051 A [EN] Grinding wheel having a bonding agent for binding abrasive grains, comprising a reaction product of a synthetic resin and cashew nut sheel liquid or its derivatives. The bonding agent may include a surface active agent.

Datum des Suchlaufs: 07.04.2021  
Dokument Nr.: 203
Titel: HIGH GRAIN CONCENTRATION GRINDING TOOL
Patentnummer: WO2007094703A1
Anmeldung: WO2007RU00021
EP20070747781
RU20060104283
Priorität: RU20060104283 20060214
WO2007RU00021 20070119
Patentfamilie: WO2007094703A1
EP1992451A1
EP1992451A4
RU2319601C2
RU2006104283A
Anmelder: SUKHONOS SERGEJ IVANOVICH
SUKHONOS SERGEY IVANOVICH
Erfinder: SUKHONOS SERGEJ IVANOVICH
SUKHONOS SERGEY IVANOVICH
IPC-Notationen: B24D0003-04
B24D0003-06
B24D0003-08
B24D0017-00
B24D0018-00
B24D0099-00
CPC-Notationen: B24D0003-06
Zusammenfassung:
Source: WO07094703 A1 [EN] The invention relates to grinding cutting, drilling and boring tools based on abrasive grains and a metal binder. The inventive grinding tool comprises a working part made of a mixture, which is distributed through the volume thereof and consists of abrasive grains bound by a binding metal, and a holder or a hole for inserting a holder, wherein the content of different composition grains, such as natural and synthetic diamond, electrocorundum, corundum and silicon carbide, in the grinding tool is greater than 50 percent of the tool working part and the remaining space is filled with the binder. Said grinding tool is characterised in that the size of abrasive grains contained therein ranges from 1 to 2000 mkm and the binder is embodied in the form of different metals and the alloys thereof based on copper, nickel, manganese, phosphorus, tin and germanium, wherein the abrasive grains are coated with metal layer whose thickness is equal to or greater than 1 mkm and which is connected to the binding metal by means of a diffusion layer, and the melting point of the coating metal is equal to or greater than the melting point of the binding metal or the different metal alloys. Said invention improves the quality of operating properties of abrasive and grinding tools and borers and increases the performance and service life thereof.
Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 204
Grinding tool with a metal-synthetic resin binder and method of producing the same

Patentnummer: WO9729886A1
Anmeldung: WO1997IB00099
EP19970901222
DE19975008987T
US19970973085
AT19960000253
BR1997PI02077

Priorität: AT19960000253 19960214
WO1997IB00099 19970207

Patentfamilie: WO9729886A1
EP0820364B1
EP0820364A1
DE59708987D1
US6063148A
AT403671B
AT25396A
BRPI9702077A

Anmelder: FISCHBACHER MARKUS
SWAROVSKI TYROLIT SCHLEIF
TYROLIT SCHLEIFMITTEL WERKE SW

Erfinder: FISCHBACHER MARKUS

IPC-Notationen: B24D0003-04
B24D0003-06
B24D0003-20
B24D0003-28

CPC-Notationen: B24D0003-06
B24D0003-28

Zusammenfassung:
Sec. 102 (e) Date Oct. 6, 1997 PCT Filed Feb. 7, 1997 PCT Pub. No. WO97/29886
PCT Pub. Date Aug. 21, 1997Grinding tool for the machining of particularly brittle materials, whose abrasive rim bond is constructed of two components, whereby one component consists of resinoid such as, for example, high temperature thermoplast or pressure sintered polymer and a second component of low melting sintered metal. The processing temperature of both components by the joint pressure sintering is the same. The nature of the invention consists in the construction of a particular connected network for each of the two different bonding agents and their interrelated spatial intertwining in the abrasive rim to an interpenetrating network. A process for the production of abrasive rims for grinding tools according to the invention is indicated
SURFACE FUNCTIONALIZED DIAMOND CRYSTALS AND METHODS FOR PRODUCING SAME

A method of functionalizing a diamond crystal comprises hydrogenating a diamond crystal, chlorinating the hydrogenated diamond crystal, and exposing the chlorinated diamond crystal to a metal precursor. The exposing step deposits a layer of metal on surfaces of the diamond crystals. The diamond crystal formed by the method possesses surface sites that form a strong bond with the layer of metal to prevent separation thereat, and the layer of metal form strong bonds to a matrix material, for example one of a vitreous and metallic matrix. The functionalized diamond crystal can be used in abrasive products.
An abrasive body comprising diamond grain or grit dispersed in a bond of aluminum and a heavier metal (the molecules of each being present as such) having a specific gravity as an alloy of between 3.0 and 4.0. 2. An abrasive body comprising diamond grain or grit dispersed in an alloy comprising a bond of silicon and a heavy metal (the molecules of each being present as such) having a specific gravity as an alloy of between 3.0 and 4.0. 3. An abrasive body comprising diamond grain or grit dispersed in a bond of aluminum and copper having a specific gravity as an alloy of between 3.0 and 4.0. 4. An abrasive body comprising diamond grain or grit dispersed in a bond of aluminum and zinc (the molecules of each being present as such) having a specific gravity as an alloy of between 3.0 and 4.0. - 5. The method of making an abrasive body of hard granular material bonded with a metallic bond which comprises selecting a hard abrasive, providing a quantity thereof in abrasive particle size, selecting a metal alloy which, when molten, has the same specific gravity within close limits as that of the abrasive material selected, melting the alloy, and bringing together a quantity of the abrasive and a quantity of the alloy and thereafter cooling, 6. The method of making an abrasive body of hard granular material bonded with a metallic bond, which comprises selecting one of the hard commercial abrasives, providing a quantity thereof in abrasive particle size, selecting a metal alloy which, when molten, has the same specific gravity as that of the abrasive selected within close limits, bringing a quantity of abrasive material selected and alloy selected together, the alloy being then in molten form, agitating and solidifying. 7. An abrasive body comprising diamond grain or grit dispersed in a metallic bond having a specific gravity as an alloy of between 3.0 and 4.0 and consisting of an alloy of a metal heavier than the bond with one of the group of light substances which has alloying properties consisting of aluminum, silicon and magnesium. 8. An abrasive body comprising diamond grain or grit dispersed in alloy bond consisting of substantially 38 parts of copper and 62 parts of aluminum, the molecules of each being present as such.
Zusammenfassung:

Source: US3036907 A [EN] (Claim 1) 1. A metal bonded abrasive product consisting of abrasive grain of from 5 to volume percent bonded with metal bond consisting essentially of at least 86% by weight of metal selected from the group consisting of ir (n and ferrite strengthening metals, and mixtures thereof, at least 50% of the weight of the bond being iron, the bond also including from 0.4% to 5% by weight phosphorous, from a trace amount of carbon to 0.8% carbon, and from zero to 7% sulphur, said bond having a melting point above 750°C and having been sintered at a temperature of between 750°C and 1100°C, said phosphorous producing grain boundary weakening
Zusammenfassung:
Source: US2137201 A [EN] 1. An abrasive article consisting of abrasive material comprising diamonds embedded and dispersed in a slurry resin matrix coxing size principally of
Titel: ANNULAR CUTTING BLADES

Patentnummer: DE1963872A1

Anmeldung: DE19691963872
US19690844904
JP19700009651
GB1969061195
FR19700002558
CH19700001384

Priorität: US19690844904 19690725

Patentfamilie: DE1963872A1
US3640027A
JP4804051584
GB1243910A
FR2056122A5
CH526370A

Anmelder: JOEL M ALBERT
SEL REX CORP
WEISS SHIRLEY IRVING

Erfinder: WEISS SHIRLEY IRVING

IPC-Notationen: B24D0003-04
B24D0003-08
B24D0005-00
B24D0005-12
B24D0018-00

Zusammenfassung:

Source: US3640027 A [EN] Annular cutting blades having thin metal cores carrying annular cutting portions comprising abrasive particles such as diamond dust and a metallic matrix in which the particles are embedded; the matrix being of metal or metal alloys of selected hardness

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 210
The method of forming an abrasive composition of matter consisting of small particle sized diamonds dispersed throughout a metallic matrix which comprises surfacing the diamonds with a metal selected from the group of metals consisting of Ag, Au and Cu, forming a mixture of metal powders consisting of a refractory metal and a bonding metal therefor, the amount of the bonding metal being at least sufficient to effect a sintering of the refractory metal at temperatures approximating but not over 800-850° C., incorporating the metal surfaced diamonds in said metal powder mixture in an amount within the range one part diamonds to from 5 to 15 parts of the metal powder, by weight, compacting the diamond-metal powder mixture, heating the compacted mixture under non-oxidizing conditions to a temperature approximating 800-850° C. at atmospheric pressure for a short time interval to sinter the same, heating the sintered product under reduced pressures for an extended time interval to a temperature within the range 700-800° C. to degasify the sintered product, and removing and cooling the resultant silver-solder impregnated sintered product.
ARTICLE MADE FROM POWDERED MIXES AND ITS MANUFACTURE

PATENTNUMMER: US2197655A
ANMELDUNG: US19360093038
PRIORITÄT: US19360093038 19360728
PATENTFAMILIE: US2197655A
ANMELDER: CARBORUNDUM CO
ERFINDER: BOYER JOHN A

 IPC-Notationen: B24D0003-04, B24D0003-08, C22C0026-00
 CPC-Notationen: B22F2998-00, B24D0003-08, C22C0026-00, Y10T0024-4037

Zusammenfassung:

Source: US2197655 A [EN] 1. Having thus described my invention. I claim: 1] The process of forming an abrasive article in which the abrasive is bonded 'by a metal alloy consisting essentially of a solid solution, which comprises forming a mix containing abrasive grain and at least two components of the said solid solution in finely divided form, one of said components being present in minor proportion and having a melting point substantially lower than the temperature of complete melting of the alloy, and sintering the metal powder by applying pressure to the mix and heating it until the metallic portion of the mix, after passing through a plastic condition, in which a portion of the metal is molten, resolidifies to form a compact solid solution alloy firmly holding the abrasive grain, the temperature at all times being below that temperature at which the alloy becomes completely molten.

Datum des Suchlaufs: 07.04.2021

Dokument Nr.: 212
Title: ABRASIVE ARTICLES AND METHODS FOR FORMING SAME

Patentnummer: WO2020006491A1

Anmeldung: WO2019US39946
US20190457462
CN201980048287
KR20217003079
BR20201126805
IL20200279764
IN202027055876

Priorität: US20180692309P 20180629
US20190457462 20190628
WO2019US39946 20190628

Patentfamilie: WO2020006491A1
US2020001429A1
CN112437713A
KR20210014757A
BR112020026805A2
IL279764AA
IN202027055876A

Anmelder: SAINT GOBAIN ABRASIFS SA
SAINT GOBAIN ABRASIVES INC

Erfinder: RAPAKA SRIKANTH
SARANGI NILANJAN
ZALESKI ROGER P

IPC-Notationen: B24D0003-04
B24D0003-10
B24D0003-18
B24D0003-34
B24D0018-00
C09K0003-14

Zusammenfassung:

Source: US2020001429 AA [EN] An abrasive article including a bonded abrasive having a body of a diameter of at least 260 mm and a volume of at least 20 cubic centimeters, the body also having a bond material including an inorganic material, abrasive particles having an abrasive particle size of at least 40 microns contained in the bond material, and a certain Homogeneity Factor.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 213
Titel: Grinding wheel for grinding titanium

Patentnummer: US4575384A

Anmeldung: US19840615847

Priorität: US19840615847 19840531

Patentfamilie: US4575384A

Anmelder: NORTON CO

Erfinder: LICHT ROBERT H
           RUE CHARLES V

IPC-Notationen: B24D0003-04
                B24D0003-14
                B24D0099-00
                C09K0003-14

CPC-Notationen: B24D0003-14
                B24D0099-00
                C09K0003-1436

Zusammenfassung:

Source: US4575384 A [EN] An abrasive product and process is disclosed, for grinding titanium metal and its alloy. The product used to grind the titanium consists of a grinding wheel wherein the abrasive grains are aggregates of silicon carbide particles bonded together with a refractory bond such as silicon oxynitride or a silicate based material.

Datum des Suchlaufs: 07.04.2021

Dokument Nr.: 214
Titel: THERMOSET-RESIN IMPREGNATED HIGH-SPEED VITREOUS GRINDING WHEEL

Patentnummer: DE2130277A1

Anmeldung: DE19712130277
US19700047581
FR19710022291
CA1970096516
AU19710030151
BE19710768623
ES19710392327
IT19710069083
ZA19710003881

Priorität: US19700047581 19700618

Anmelder: NORTON CO

Erfinder: NELSON R S
ROWSE R A
ROWSE ROBERT ALFRED
STANLEY NELSON ROY

IPC-Notationen: B24D0003-04
B24D0003-18
B24D0003-20
B24D0003-32
B24D0003-34
B24D00018-00

CPC-Notationen: B24D0003-18
B24D0003-32
B24D0003-348
B24D00018-0027

Zusammenfassung:
Source: US3615302 A [EN] A porous vitreous bonded high-speed abrasive grinding wheel in which between about 95 percent and 100 percent of the pore volume of either the annular portion of the wheel adjacent to the hole or the entire wheel is impregnated with either a thermoset epoxy resin which is a copolymer of a liquid epoxy prepolymer and an amine or organic acid anhydride, or, a thermoset unsaturated polyester resin which is a copolymer of a polyester prepolymer containing ethylenic unsaturation and an ethylenically unsaturated reactive diluent like styrene, vinyl acetate, methyl methacrylate, and the like. The wheel is preferably impregnated by applying the mixture of liquid prepolymer and hardener (cross-linking agent) to one side of the wheel over the area to be impregnated, preferably with a vacuum applied to one side of the wheel to draw the liquid prepolymer-hardener mixture into the pores of the wheel. Copolymerization (cross-linking) of the prepolymer-hardener mixture occurs in situ in the pores. The cross-linked epoxy or unsaturated polyester resin may form an internal bushing of solid resin with substantial radial impregnation into the wheel. In such cases, the prepolymer-hardener mixture is introduced into the wheel hole around an arbor with a mold plate over both sides of the hole and extending radially along the wheel surfaces to the extent of desired penetration.
Titel: AMIDE IMPREGNATED GRINDING WHEELS

Patentnummer: DE1652892A1

Anmeldung: DE19671652892
US19660592741
GB19670023264

Priorität: US19660592741 19661108

Patentfamilie: DE1652892A1
US3471277A
GB1139868A

Anmelder: CINCINNATI MILLING MACHINE CO

Erfinder: ACKERMANN RUSSELL A JR
ALBERT ACKERMANN JUN RUSSELL

IPC-Notationen: B24D0003-04
B24D0003-18
B24D0003-34

CPC-Notationen: B24D0003-18
B24D0003-34
B24D0003-348

Zusammenfassung:
Source: US3471277 A [EN] ABSTRACT OF THE DISCLOSURE A novel grinding wheel has been provided which comprises of abrasive grits, a vitrified bond holding said grits together to form the grinding wheel and having its interstitial space filled essentially with an amide of a diamine 15 and a carboxylic acid having a melting point of at least 225° F. and wherein the amine precursor is an aliphatic diamine, a cycloaliphatic diamine or an aromatic diamine. An improved grinding method has also been disclosed.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 216
Zusammenfassung:
Source: WO0059684 A1 [EN] The invention relates to a self-lubricating abrasive tool. Chip-producing abrasive grains (5) are embedded in a porous binding matrix that is impregnated with a lubricant. The aim of the invention is to introduce a sufficient amount of lubricant into the tool and to prevent premature centrifugation of said lubricant. To this end, the porosity of the binding matrix is provided with an open-pored fine structure in relation to the average size and/or the average distance of the abrasive grains (5). The fine structure is provided with micropores (7) that are basically linked to each other and are filled with the lubricant. The fine structure can be especially maintained by using a grained micropore producer which is essentially dimensionally stable during the hardening of the binding matrix, e.g. by sintering or burning. Said micropore producer is removed when micropores are produced.
Titel: VITRIFIED ABRASIVE SOLID MASS HAVING PORES FILLED WITH RESIN, AND SOLID LUBRICANT AGENT

Patentnummer: US6428587B1
Anmeldung: US20010920742
Priorität: US20010920742 20010803
Patentfamilie: US6428587B1
Anmelder: NORITAKE CO LTD
Erfinder: ITO KENJI


Zusammenfassung:
Source: US6428587 BA [EN] An abrasive vitreous bonded solid mass having a vitrified abrasive structure comprising abrasive grains which are held together by an inorganic bonding agent, the abrasive structure is impregnated with a composition which comprises a resin and a solid lubricant agent. The abrasive solid mass is manufactured by preparing the composition comprising the resin and the solid lubricant agent, impregnating the vitrified abrasive structure with the composition, and curing the composition.
Various embodiments disclosed relate to an abrasive article. The abrasive article includes a fibrous web comprising a plurality high-heat resistant fibers. The fibrous web further includes a plurality of shaped abrasive particles attached to the fibrous web.
**Titel:** LARGE DIAMETER CUTTING TOOL

**Patentnummer:** WO2014036097A1

**Anmeldung:**
- WO2013US57014
- EP20130833510
- US2013012171
- CN20130043628
- AR2013P103063
- RU20150108681

**Priorität:**
- US20120694142P 20120828
- US20130012171 20130828
- WO2013US57014 20130828

**Patentfamilie:**
- WO2014036097A1
- EP2890522A1
- EP2890522A4
- US9138869B2
- US2014073230A1
- CN104684687A
- CN104684687B
- AR092275AA
- RU2015108681A

**Anmelder:**
- DELEUZE CHARLES
- MCNEAL KELLEY
- SAINT GOBAIN ABRASIFS SA
- SAINT GOBAIN ABRASIVES INC
- SCHUCH ANDREW B
- SRINIVASAN SIDDHARTH

**Erfinder:**
- DELEUZE CHARLES
- KELLY MCNEAL
- MCNEAL KELLEY
- SCHUCH ANDREW B
- SRINIVASAN SIDDHARTH

**IPC-Notationen:**
- B24D0003-06
- B24D0003-30
- B24D0003-34
- B24D0005-04
- B24D0005-12
- B26D0001-43

**Zusammenfassung:**
Source: US2014073230 AA [EN] An abrasive cutting tool includes a body in a shape of a large diameter disk having an outer diameter of at least about 60 centimeters. The body has an aspect ratio defined as a ratio (D: T) between the outer diameter to an axial thickness of the body of at least about 10: 1. The body includes an abrasive portion having a bond material and abrasive particles contained within the bond material. The abrasive portion also includes a first filler having iron and sulfur with an average particle size of not greater than about 40 microns. The body also includes a reinforcing member and a Thermal Adhesion Factor (TAF) of at least about 30 percent.

**Datum des Suchlaufs:** 07.04.2021

**Dokument Nr.:** 220
Titel: ANNUAL GRINDSTONE

Patentnummer: DE102020207131A1

Anmeldung: DE202010207131
US20200891184
JP20190108506
CN202010465911
KR2020062891
TW20200119421
SG20201004874

Priorität: JP20190108506 20190611

Patentfamilie: DE102020207131A1
US2020391351A1
JP2020199595A2
CN112059933A
KR20200141930A
TW202112497A
SG10202004874RA1

Anmelder: DISCO ABRASIVE SYSTEMS LTD
DISCO CORP

Erfinder: HIROKI AIKAWA

IPC-Notationen: B24D0003-06
B24D0005-12
B24D0005-16
B24D0018-00
B28D0001-24
B28D0005-02
H01L0021-301

Zusammenfassung:
Source: US2020391351 AA [EN] An annular grindstone includes a grindstone section that includes a binder and abrasive grains dispersed and fixed in the binder, in which the binder includes a tin-nickel alloy. Preferably, a content of tin in the tin-nickel alloy is equal to or more than 57 wt percent and less than 75 wt percent. In addition, preferably, the annular grindstone consists of the grindstone section. Alternatively, the annular grindstone further includes an annular base having a grip section, and the grindstone section is exposed to an outer peripheral edge of the annular base.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 221
Aluminum-boron-carbon abrasive article and method to form said article

Source: US6042627 A [EN] An aluminum-boron-carbon abrasive article is comprised of at least three phases selected from the group consisting of: B4C; AlB2; AlB12; Al4C3; AlB24C4; AlB24C4; AlB24C4 and AlB2. At least a portion of the surface of the abrasive article is comprised of abrasive grains of at least one phase selected from the group consisting of AlB24C4, Al4BC and AlB2, where the abrasive grains have an average grain size that is at least about two times greater than the average grain size of the grains containing boron and carbon within the abrasive article. The aluminum-boron-carbon abrasive article of claim 1 is prepared by heating, under a vacuum or inert atmosphere, a body comprised of at least one boron containing phase and at least one carbon containing phase in the presence of a separate source of aluminum, such as aluminum metal or alloy thereof. The boron and carbon containing phase each are selected from the group consisting of: B4C; AlB2; AlB12; Al4C3; AlB24C4; AlB24C4 and Al4BC. The body is heated with the separate source of aluminum, such that at least a portion of the surface of the body is contacted by liquid or vaporous aluminum for a time and temperature sufficient to form the aluminum-boron-carbon abrasive article.
Zusammenfassung:

Source: WO12138705 A2 [EN] The present invention is directed to a self-conditioning polishing pad. The self-conditioning polishing pad comprises a water-insoluble polymeric foam matrix and water-insoluble polymeric foam particles within the foam matrix. The particles are coated with a water-soluble component over a portion of the surface area of the particle. The particles may have a diameter in the range of 5 to 2000 microns in diameter.
Titel: ABRASIVE ARTICLES HAVING A PLURALITY OF PORTIONS AND METHODS FOR FORMING SAME

Patentnummer: WO2018049204A1

Anmeldung: WO2017US50743
EP20170849641
US20170331836
CN201780065367
KR20197009861

Priorität: US20160385705P 20160909
US20170331836 20170908
WO2017US50743 20170908

Patentfamilie: WO2018049204A1
EP3509793A1
EP3509793A4
US2019375073A1
CN109890567A
KR20190041019A

Anmelder: SAINT GOBAIN ABRASIFS SA
SAINT GOBAIN ABRASIVES INC

Erfinder: BAYARD FLAVY
JANECZEK PETER
MARTIN AMANDINE
SCHWARZKOPF JOACHIM


Zusammenfassung:

Source: US2019375073 AA [EN] An abrasive article can include a body including a plurality of portions including a first abrasive portion and a second abrasive portion. The first abrasive portion can include a vitreous bond material and abrasive particles contained within the bond material. The second abrasive particles can include an organic bond material and abrasive particles contained within the bond material. The body can have a burst speed of at least 65 m/s. In an embodiment, the abrasive article can include an interior portion coupled to the first and second abrasive portions. In another embodiment, the interior portion can optionally include abrasive particles or a filler material.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 224
Titel: Grinding wheel (Machine translation)
Patentnummer: DE1012750B
Anmeldung: DE1952C006512
Priorität: 19521007
Patentfamilie: DE1012750B
Anmelder: CARBORUNDUM CO
Erfinder: DOENHOFF CARL VON GOEPFERT GEORGE JOSEPH

IPC-Notationen: B24D0003-20, B24D0003-22, C08J0005-14
CPC-Notationen: B24D0003-22, C08K0003-22, C08K0005-07, C08L0009-02, C08L0061-04

Zusammenfassung:
Claim 1. Schleifkörper, die mit Kautschuk gebunden sind, dadurch gekennzeichnet, daß das neben einem Copolymerisat eines konjugierten Diolefins, z. B. Butadien, mit einem Nitril, wie Acryl- und/oder Methacrylsäurenitril, auch noch verhältnismäßig wenig Benzil enthält.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 225
Flexible abrasive coated cloth

Source: GB1056023 A [EN] A flexible abrasive-coated cloth comprises a cloth backing having a layer of abrasive grains secured to one face by means of an adhesive layer comprising a mixture of animal glue, a water-soluble high boiling plasticizer, for example hexanetriol, and a major proportion of an elastomer, for example a butadiene-styrene copolymer. The cloth may be made by applying the adhesive in aqueous form to the cloth, coating with the abrasive grains, and setting the adhesive by partial drying.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 226
**Titel:**  
GRINDING MEMBER

**Patentnummer:**  
EP1595647B1

**Anmeldung:**  
EP20040015175  
DE200450004567T  
DE200420007806U  
US20050051837  
AT20040015175T  
DK20040015175T  
ES20040015175T

**Priorität:**  
DE200420007806U 20040514

**Patentfamilie:**  
EP1595647B1  
EP1595647A3  
EP1595647A2  
DE202004007806U1  
DE502004004567D1  
US2005255802A1  
AT369234E  
DK1595647T3  
ES2288652T3

**Anmelder:**  
JOEST PETER  
JOST PETER

**Erfinder:**  
JOEST PETER  
JOST PETER

**IPC-Notationen:**  
B24D0003-20  
B24D0003-26  
B24D0003-32  
B24D0013-00  
B24D0013-12  
B24D0013-14  
B24D0015-00  
B24D0015-04

**CPC-Notationen:**  
B24D0003-26  
B24D0003-32  
B24D0013-12  
B24D0013-147  
B24D0015-04

**Zusammenfassung:**

Source: US2005255802 AA [EN] A grinding member is formed as a shape-elastic monolithic element and has at least partially a three-dimensional cell structure on a grinding surface of the grinding member. The grinding surface has a first abrasive agent. The grinding surface has at least partially an open-cell structure with open cells. The open cells of the grinding surface communicate via passages with cells of the interior of the grinding member. The cells in the interior of the grinding member that communicate via passages with the open cells of the grinding surface contain a second abrasive agent.

**Datum des Suchlaufs:** 07.04.2021

**Dokument Nr.:** 227
Titel: ORGANIC BONDED ABRASIVE PRODUCT

Patentnummer: US2529712A

Anmeldung: US19480037513

Priorität: US19480037513 19480708

Patentfamilie: US2529712A

Anmelder: NORTON CO

Erfinder: DOUGLAS TEAGUE ERNEST


Zusammenfassung:
Source: US2529712 A [EN] (Claim 1) 1. An abrasive article comprising abrasive grains bonded with a bond comprising from volume percent to 95 volume percent of shellac, at least 50 percent of the remainder of the bond by volume being synthetic resin selected from the group consisting of phenol formaldehyde and glyptal and mixtures thereof, and said bond containing between 5 percent and 50 percent inclusive of nitroparafin having between 2 and 4 carbon atoms by weight based on the synthetic resin.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 228
Zusammenfassung:
Source: US5669941 A [EN] The present invention provides a coated abrasive article, wherein the backing includes a tough, heat resistant, thermoplastic binder material, and an effective amount of a fibrous reinforcing material distributed throughout the thermoplastic binder material. The abrasive grain adhered to the backing comprise rare earth oxide-modified alpha alumina-based abrasive grain, which exhibit a surprising improvement in grinding performance in conjunction with the backing.
Title: ABRASIVE PRODUCT HAVING A BINDER COMPRISING AN AMINOPLAST BINDER

Patent number: EP0500369B1

Application:
EP19920301404
DE19926007789T
US19910659752
JP19920034856
CA19922060329
AU19920010698
KR19920002704
BR1992PI00580
ES19920301404T
MX1992000687
ZA19920000772

Priority:
US19910659752 19910222
CA19922060329 19920130

Patent family:
EP0500369B1
EP0500369A3
EP0500369A2
DE69207789T2
DE69207789D1
US5236472A
JP5057625A2
JP3133453B2
CA2060329A
AU642338B2
AU199210698A1
KR19920016576A
BRPI9200580A
ES2082359T3
MX9200687A1
ZA9200072A

Assignee:
3M CO
MINNESOTA MINING AND MANUFACTURING

Inventors:
ARAN REIMONDO KAKAU
ERITSUKU JIIYOOI RAAISON
KIRK ALAN R C O MINNESOTA MINI
KIRK ALAN RAYMOND
LARSON ERIC G C O MINNESOTA MINI
LARSON ERIC GEORGE

IPC Notation:
B24D0003-20
B24D0003-28
B24D0003-34
B24D0011-00
C08J0005-14

CPC Notation:
B24D0003-28
B24D0003-342
B24D0011-02
C08J0005-14
Zusammenfassung:

Abrasive products comprising abrasive grains bonded together or bonded to a backing by means of a binder compressing an oligomeric aminoplast resin having on average at least one pendant alpha, beta-unsaturated carbonyl group per oligomeric unit. The oligomeric aminoplast resins polymerize via free radical polymerization at the site of the alpha, beta-unsaturation. Polymerization is initiated by a source of free radicals. The source of free radicals can be generated by electron beam radiation or by an appropriate curing agent or initiator upon exposure to heat or radiation energy. The coated abrasive of this invention demonstrates improved grinding performance under severe conditions as compared with coated abrasives comprising radiation curable resins heretofore known.
Titel: WATERPROOF PAPER-BACKED COATED ABRASIVES
Patentnummer: WO9803307A1
Anmelder: NORTON CO
Erfinder: GAETA A C GAETA ANTHONY C GAETA EHNTONI S SUEJ GUO SHIN SWEI G S SWEI GWO SHIN
Zusammenfassung:

Source: US5624471 A [EN] Waterproof coated *abrasive* paper made using a maker and/or size coat comprising a radiation-curable binder that is hydrophobic when polymerized.
ABRASIVE MATERIAL PRODUCT CONTAINING INCLUSION COMPOUND

Patentnummer: WO2010027937A3

Anmeldung: WO2009US55506
       EP20090812091
       US20090059312
       JP20080224387
       CN200980139176

Priorität: JP20080224387 20080902
       US20090059312 20090831
       WO2009US55506 20090831

Patentfamilie: WO2010027937A3
       WO2010027937A2
       EP2340151B1
       EP2340151A4
       EP2340151A2
       US8617272B2
       US2011143974A1
       JP2010058187A2
       JP5248954B2
       CN102171001A
       CN102171001B

Anmelder: 3M INNOVATIVE PROPERTIES CO
          THREE M INNOVATIVE PROPERTIES
          YAMAHARA MICHIHIRO

Erfinder: YAMAHARA MICHIHIRO

IPC-Notationen: B24D0003-20
                B24D0003-28
                B24D0003-34
                B24D0003-34
                B24D0003-34
                B24D0003-34
                B24D0011-00
                B24D0011-08
                B24D0011-14

CPC-Notationen: B24D0003-28
                B24D0003-34

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 232

Zusammenfassung:

Source: US2011143974 AA [EN] To provide an abrasive material product which shows an excellent effect of controlling heat generation in abrasive work and which causes no smearing in abrasive work in dry mode. An abrasive material product comprising a binder and an inclusion compound composed of a host compound and a lubricant contained therein as a guest compound.
Title: ABRASIVE ARTICLE, ABRASIVE SLURRIES AND METHOD OF MAKING AN ABRASIVE ARTICLE

Patentnummer: WO200143919A1

Anmeldung: WO2000US31907
AU20010017838D
AU20010017838

Priorität: US19990461959 19991215
WO2000US31907 20001120

Patentfamilie: WO200143919A1
AU200117838A5
AU200117838A1

Anmelder: 3M INNOVATIVE PROPERTIES CO

Erfinder: CULLER SCOTT R
WALLACE JOHN T

IPC-Notationen: B24D0003-20
B24D0003-28
B24D00003-34
B24D0011-00
B24D0018-00
C09K0003-14

CPC-Notationen: B24D0003-28
B24D0003-34
B24D0011-001
B24D0018-00
C09K0003-1472

Zusammenfassung:

Source: WO0143919 A1 [EN] The present invention relates to abrasive articles having an abrasive coating comprised of a binder, abrasive particles having a Mohs' hardness of 7 or greater and non-abrasive particles having a Mohs' hardness less than about 6, wherein the non-abrasive particles have a particle size that is greater than the particle size of the abrasive particles. The abrasive slurries that are used to make the abrasive coating of the present invention may be used in both coated, structured and nonwoven abrasive articles as well as in making composite particles. The invention also relates to methods of making coated and non-woven abrasive articles and methods of making composite particles.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 233
Zusammenfassung:

Source: US4997717 A [EN] The preparation of abrasives, especially abrasive papers and abrasive fabrics, is improved by using an epoxy resin in conjunction with a cationic photoinitiator as binder for the abrasive particles. The binder is cured by irradiation with shortwave light and subsequent heating. The process is distinguished by low curing temperatures and brief curing times.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 234
**Titel:** PROCESS FOR PRODUCING COATED ABRASIVE MATERIAL

**Patentnummer:** [WO9907517A1](https://www.wipo.int/pctdb/en/searchResult.jsp?searchId=1253499159&outputId=1253499159&searchType=pct&language=en)

**Anmeldung:**
- WO1998US13631
- JP19970216252
- AU19980082778

**Priorität:**
- JP19970216252 19970811
- WO1998US13631 19980701

**Patentfamilie:**
- WO9907517A1
- JP11048151A2
- AU199882778A1

**Anmelder:**
- 3M CO
- MINNESOTA MINING AND MFG
- OHISHI MICHIHIRO

**Erfinder:**
- OHISHI MICHIHIRO
- OISHI MICHIHIRO

**IPC-Notationen:**
- B24D0003-20
- B24D0003-28
- B24D0003-34
- B24D0011-00
- C09D0163-00
- C09K0003-14

**CPC-Notationen:**
- B24D0003-28
- B24D0003-34
- B24D0011-001

**Zusammenfassung:**
Source: WO9907517 A1 [EN] The method of the invention simplifies the production process of a coated abrasive article and shortens the production time by omitting the step of sealing a porous substrate and by shortening the curing time of a bonding agent. A process for producing a coated abrasive article comprising the steps of: providing a porous substrate; applying a first bonding agent on at least one surface of the porous substrate to form a make coat layer; placing abrasive particles on the make coat layer; and applying a second bonding agent on the make coat layer and the abrasive particles to make a size coat layer, wherein, said first bonding agent, second bonding agent or both agents comprise (i) a solid epoxy resin having a melt viscosity coefficient of 1,000 cps (1 Pa. s) or more at 120 DEG C and (ii) a curing catalyst.

**Datum des Suchlaufs:** 07.04.2021

**Dokument Nr.:** 235
Titel: Abrasive member

Patentnummer: US5456734A

Anmeldung: US19940239387
JP19930106980

Priorität: JP19930106980 19930507

Patentfamilie: US5456734A
JP6315865A2
JP3135741B2

Anmelder: FUJI PHOTO FILM CO LTD

Erfinder: FUJYAMA MASAAKI
RYOKE KATSUMI
RYOMO KATSUMI
SATO MASAMI

IPC-Notationen: B24D0003-20
B24D0003-28
B24D0003-34
B24D0011-00
G11B0005-187
G11B0005-41
G11B0005-84

CPC-Notationen: B24D0003-28
B24D0003-342
G11B0005-1871
G11B0005-41
G11B0005-84

Zusammenfassung:

Source: US5456734A [EN] An abrasive tape for polishing a magnetic head includes a substrate and an abrasive layer which is formed on the substrate. The abrasive layer is composed of abrasive grains and a binder having an acidic functional group. The abrasive layer contains basic carbon black having a pH within the range of 7 to 10 and a mean grain size of 0.01 to 0.1 μm.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 236
Titel: Abrasive article

Patentnummer: WO9516547A1

Anmeldung: WO1994US12177
EP19950900410
DE19946015174T
US19930168655
JP19950516745T
CA19942178743
AU19940081242
KR19960703150
BR1994P108298

Priorität: US19930168655 19931216
WO1994US12177 19941024

Patentfamilie: WO9516547A1
EP0734309B1
EP0734309A1
DE694151747T2
DE69415174D1
US5391210A
JP9506557T2
CA2178743A
AU675891B2
AU199481242A1
KR960706390A
KR19960706390A
BRPI9408298A

Anmelder: MINNESOTA MINING AND MFG

Erfinder: BILKADI ZAYN
KLUN THOMAS P

IPC-Notationen: B24D0003-20
B24D0003-28
B24D0003-34
C04B0035-01
C08F0290-00
C08F0299-00
C08F0299-02
C08L0033-00
C08L0033-04
C08L0033-06
C08L0057-00
C08L0075-00
C08L0075-16

CPC-Notationen: B24D0003-28
B24D0003-342
Zusammenfassung:
Source: US5391210 A [EN] Abrasive articles comprising a plurality of abrasive grits and a cured ceramer. The cured ceramer is formed from a liquid dispersion comprising a dispersing liquid and non-aggregated colloidal metal oxide particles dispersed in the dispersing liquid, wherein the dispersing liquid comprises a free-radically polymerizable composition.
Zusammenfassung:

Source: US4802896 A [EN] The invention provides a novel resin comprising the reaction product of reactive, curable phenolic resin such as resole phenolic resin with a thermally stable, aromatic ligand such as a phthalocyanine compound and abrasive products which include a bond system comprising a mixture or reaction product of a curable hard resin and thermally stable, aromatic ligand. The preferred abrasive products are coated and three-dimensional, low density abrasive products
Zusammenfassung:

Source: DE29600616 U1 [MT] (Claim 1) 1 Slip ring for grinding large objects, since marked containers, et that the Schleiffläche des slip ring (1) with slots (2) provided that, starting from the radially inner and / or äußerenRand the Schleiffläche (3) over a portion of the same erstrecken.20
METHODS FOR PRODUCING GRANULAR MOLDING MATERIALS FOR ABRASIVE ARTICLES

Patentnummer: **WO02092287A1**

Anmeldung: WO2002US02652
US20020334455
US20010855950
FR20020006001
AU20020237981
BE2002000320
CH2002000372
IT2002M101006

Priorität: US20010855950 20010515
WO2002US02652 20020130
US20020334455 20021230

Patentfamilie: **WO02092287A1**
US6514302B2
US2003099150A1
US2002184829A1
FR2824837B1
FR2824837A1
AU2002237981A1
BE1014832A4
CH695850A
ITM20021006A1
ITM20021006A0

Anmelder: GOUTTE RENE
HOLDEN ROBERT L
LEMBERGER MICHAEL J
MCNAMARA JOHN P
PELLERIN RAYMOND J
SAINT GOBAIN ABRASIVES INC
SAINT GOBAIN SA

Erfinder: GOUTTE RENE
HOLDEN ROBERT L
LEMBERGER MICHAEL J
MCNAMARA JOHN P
NAMARA JOHN P MC
PELLERIN RAYMOND J

IPC-Notationen: B24D0003-20
B24D0003-28
B24D0005-00
B24D0005-02
B24D0007-00
B24D0007-02
B24D0018-00
C08J0005-14
C09K0003-14

CPC-Notationen: B24D0003-28
B24D0005-02
B24D0007-02
B24D0018-0009

Zusammenfassung:
Source: US2002184829 AA [EN] Granular molding materials for fabricating abrasive articles, such as, for example, grinding wheels, are produced by mixing heated abrasive grains with a resin blend including two phenol-novolac resins. Preferably, the resin blend is added to the abrasive grains in the mixer apparatus of the invention, which can be a bowl type mixer. The mixer can be preheated by directing a heated gas, such as air, across the mixer. The granular molding material can also include a curing agent, fillers and other materials generally employed in fabricating abrasive articles.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 240
Zusammenfassung:
Source: US6077601 A [EN] A coated abrasive article comprises a backing, a first binder on the backing, and a plurality of abrasive particles in the first binder. The first binder precursor is an energy-curable preferably, melt-processable resin containing an epoxy resin, an ethylene-vinyl acetate copolymer, and a curing agent for crosslinking the epoxy resin that is cured to provide a crosslinked make coating. The above binder precursors of the invention are preferably free of homopolymers and copolymers of olefinic monomers. In another aspect, the invention also describes an energy curable first binder precursor containing an epoxy resin, an ethylene-vinyl acetate copolymer, a polyfunctional acrylate component and a curing agent for crosslinking the epoxy resin that is cured to provide a crosslinked make coating. The invention also relates to a method of producing such coated abrasive articles and a surface-treated backing material.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 241
### Zusammenfassung:

Source: US6299521 BA [EN] The invention provides a polishing sheet comprising a support and an abrasive layer formed thereon with an adhesive layer interposed therebetween, characterized in that the adhesive layer is formed by a cured layer of a thermosetting and/or photo-curable adhesive composition based on at least one resin selected from the group consisting of (A) an ethylene-vinyl acetate copolymer, (B) a copolymer of ethylene, vinyl acetate, and an acrylate and/or methacrylate monomer, (C) a copolymer of ethylene, vinyl acetate, and maleic acid and/or maleic anhydride, (D) a copolymer of ethylene, an acrylate and/or methacrylate monomer, and maleic acid and/or maleic anhydride, and (E) an ionomer resin in the form of an ethylene-methacrylic acid copolymer whose molecules are bonded by a metal ion.
Die Hauptaufgabe dieser Erfindung besteht darin, harzgebundene Diamantschleifscheiben herzustellen, die die kombinierten Eigenschaften von schneller Schneidfähigkeit und ungewöhnlicher Haltbarkeit aufweisen. Solche Räder besitzen auch die Fähigkeit, ein überlegenes Finish zu erzeugen.

**Zusammenfassung:**

Die Hauptaufgabe dieser Erfindung besteht darin, harzgebundene Diamantschleifscheiben herzustellen, die die kombinierten Eigenschaften von schneller Schneidfähigkeit und ungewöhnlicher Haltbarkeit aufweisen. Solche Räder besitzen auch die Fähigkeit, ein überlegenes Finish zu erzeugen.
Zusammenfassung:
Source: GB1071364 A [EN] A raw batch mixture for the manufacture of a bonded abrasive article comprises abrasive grains, an organic bonding agent and a particulate, friable, pore-forming material, said pore-forming material consisting essentially of olivine. Insert or active fibres and/or other modifying agents may be present. The mix may be subjected to pressure in a mould to form an abrasive body, heat-treated to mature the bond and dressed in accordance with conventional practice. The olivine may comprise 3-20 percent by volume of the moulded body and may have particle size from -4 + 16 mesh (U.S. Standard Sieve). The abrasive body may be silicon carbide, aluminium oxide, zirconia, flint, garnet or bauxite or mixtures thereof. The bonding agent may be natural or synthetic resins, including the phenol-formaldehydes, urea-formaldehydes, melamine formaldehydes, epoxides, alkyds, polyesters, modified phenolics, natural and synthetic rubbers or shellac. The filler may be ergolite, iron sulphides, or fluospar in finely divided form.
Zusammenfassung:
Source: US2019061107 AA [EN] An abrasive article including a substrate; and an abrasive layer overlying the substrate, where the abrasive layer includes a blend of abrasive particles including a first type of abrasive particle comprising a polycrystalline material and having a first average friability $F_1$, and a second type of abrasive particle comprising a polycrystalline material and having a second average friability, $F_2$, where the blend comprises an average friability difference, \( \text{DELTAF} = |F_1 - F_2| \), within a range of at least 0.5 percent to not greater than 80 percent.
ROUGH GRINDING WHEEL COMPRISING A CORE

Title: ROUGH GRINDING WHEEL COMPRISING A CORE
Patentnumber: EP3081337A1
Anmeldung: EP20160158947
US20190388088
US20160077064
CA20162924939
Anmelder: KLINGSPOR AG
Erfinder: CONRADI BERND
MOOS MARKUS


Zusammenfassung:
Source: US2016288295 A A [EN] A rough grinding wheel for processing material surfaces includes a wheel-shaped base body having a central recess penetrated by an axis of rotation for direct or indirect connection to a drive shaft of a tool. The rough grinding wheel has a stabilizing core stabilizing the rough grinding wheel. The stabilizing core is associated with at least one abrasive layer circumferentially adjacent to the central recess. The stabilizing core has a higher strength than the at least one abrasive layer.
Titel: COMPOSITE ABRASIVE BODIES
Patentnummer: WO2005051599A1
Anmeldung: WO2004EP53097
EP20040804572
EP20030027086
US20100923873
US20070896573
Priorität: EP20030027086 20031125
EP20040804572 20041125
US20040580531 20041125
WO2004EP53097 20041125
US20070896573 20070904
US20100923873 20101013
Patentfamilie: WO2005051599A1
EP1689560A1
EP1535700A1
US2011023376A1
US2008200106A1
Anmelder: LINNENBRINK MARTIN
SIKA TECHNOLOGY AG
SIKA TIVOLI GMBH
Erfinder: LINNENBRINK MARTIN

Zusammenfassung:
Source: US2008200106 AA [EN] Composite abrasive bodies, which include abrasive product supports, abrasive particles and cured adhesives bonding the abrasive product supports and the abrasive products, are provided. The cured adhesives may be two-component polyurethane or (meth) acrylate adhesives. In addition, methods for preparing the composite abrasive bodies are also provided.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 247
Titel: COATED ABRASIVE ARTICLE AND METHOD OF MAKING SAME

Patentnummer: WO9812021C1

Anmeldung: WO1997US00911
EP19970903874
DE19976016285T
US19980145665
US19980046379
US19960710596
JP19980514627T
CA19972264779
AU19970018334
KR19997005799
BR1997PI11408

Priorität: US19960710596 19960920
WO1997US00911 19970123
US19980046379 19980323
US19980145665 19980902

Patentfamilie: WO9812021C1
WO9812021A1
EP0932477B1
EP0932477A1
DE69716285T2
DE69716285D1
US5922784A
US5863847A
US5766277A
JP2002500568T2
CA2264779C
CA2264779A
AU715923B2
AU199718334A1
KR20000069719A
KR100463617B1
BRP9711408A

Anmelder: 3M CO
MINNESOTA MINING AND MFG CO

Erfinder: DAHIKE GREGG D
DAHLKE GREGG D
DEVOE J
HARMON KIMBERLY K
MASMAR CRAIG A
VOE ROBERT J DE

IPC-Notationen: B24D0003-28
B24D0011-00
C08J0005-14
C08L0063-00
C08L0067-02

CPC-Notationen: B24D0003-28
B24D0011-00
Y10T0442-2746
Y10T0442-2754
Zusammenfassung:

Source: US5766277 A [EN] A coated abrasive article comprises a backing, a first binder (i.e., a make coat) on the backing, and a plurality of abrasive particles in the first binder. The first binder precursor is an energy-curable melt-processable resin containing an epoxy resin, a polyester component, a polyfunctional acrylate component, and a curing agent for crosslinking the epoxy resin that is cured to provide a crosslinked make coating. The invention also relates to a method of producing such coated abrasive articles and a surface-treated porous cloth material.
Titel: Process of making abrasive phenolic resin mixes

Anmeldung: DE1952013101
US19510252391
GB19520023095
00000000

Priorität: US19510252391 19511020
GB19520023095 19520915

Patentfamilie: DE937730A
US2708622A
GB748696A
FR1068950A

Anmelder: CIE DES MEULES NORTON
DEUTSCHE NORTON GMBH
NORTON GES M B H DEUTSCHE
NORTON GRINDING WHEEL CO LTD

Erfinder: STONE HYMAN NATHAN

IPC-Notationen: B24D0003-28
C08J0005-14
C08L0061-10

CPC-Notationen: B24D0003-285

Zusammenfassung:
Source: GB748696 A [EN] Moulding powders for making shell moulds or abrasive articles, e.g. grinding-wheels, and comprising granules of sand c. wetted with a plasticizer and coated with a partially cured phenolic resin are prevented from sticking together by fluidizing the granules in a current of air or other gas at temperatures from 40-200 DEG C. In making the mixture sufficient plasticizer, e.g. furfural or liquid reactive phenolic resin is added to pick up nearly all the abrasive powder leaving 1 per cent free powder and the powdered phenolic resin is then added. In examples mixtures comprising 22.4 lbs. 24-grit size alumina, 0.52 lb. liquid resin and 1.78 lbs. solid resin are specified. This mixture is fed successively through hoppers 1, 9 and thence, by means of pressure supplied by air fed through line 21, through glass tube 12 and heater 13 to the upper chamber 31 of the fluidizing apparatus comprising a steel cylinder 35 divided into upper and lower chambers 31, 39 by a porous plate 41 and provided with electric heating coils 36. The lower chamber is cone-shaped and has an inlet pipe for the fluidizing gas while above the chamber 31 is provided a glass tube 73 in which the extent of the fluidizing action may be observed and from which passes a pipe 89 to a centrifugal separator 93 in which any powder carried over by the fluidizing gas is separated, the gas being vented through a receiver 98 containing water. Fluidizing gas is supplied under pressure from the mains 29, the pressure being sufficient to give the required differential pressure for the feed at points 14 and 43 respectively. The air is first dried by passage through a glass wool filled trap 26 and then passes to the T-piece 22 where the supply is divided to feed the lines 21 and 68. The latter supply passes through a cylinder 61 containing a dehydrator, e.g. calcium sulphate, and thence through a ceramic pipe 48 fitted with resistance heating wires into the base of a cylinder 47 from the top of which the dried air passes through an electrically heated tubular heater 55, 56 into the base of the cone-shaped chamber 39. A mercury pressure gauge 103 connected on the one side through pipes 105, 106 to the upper chamber 35 and on the other side through pipes 102, 101 and T-union 100 to the lower chamber 39 enables the pressure differential to be controlled in conjunction with the temperature limit specified read off at thermometers 111 and thermocouple 109 that the level of the fluidized mixture is controlled to rise to the level of the outlet 77 from which catalyst is continually withdrawn through line 78 to receiver 80.
Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 249
GRINDING TOOL HAVING A RIGID AND DIMENSIONALLY STABLE RESIN BINDER

Source: US3850589 A [EN] A grinding tool useful for rapid grinding of a precision cut is described which comprises a high concentration of abrasive grains uniformly dispersed in a non-brittle resin binder body which is rigid and dimensionally stable under the required grinding pressure.
METHOD OF MANUFACTURING ABRASIVE ARTICLES

Title: METHOD OF MANUFACTURING ABRASIVE ARTICLES
Patentnummer: US2249279A
Anmeldung: US19370176294
Priorität: US19370176294 19371124
Patentfamilie: US2249279A
Anmelder: NORTON CO
Erfinder: KISTLER SAMUEL S


Zusammenfassung:
Source: US2249279 A [EN] 1. Method of making an abrasive body comprising abrasive grain bonded with 9. resin which is the polymerized product of phenol and its homologues with formaldehyde and its homologues which comprises adding to the mixture of the foregoing a quantity of non-acidic inorganic dehydrating agent capable of taking up water of reaction at a temperature substantially above 100° C., pressing the mixture, and curing the pressed product in an autoclave at a temperature substantially above 100° C. under 9. pressure sufficient to prevent any water in the body from passing into steam, whereby swelling is avoided by preventing the generation of steam and water formed in the body is eventually taken up by the dehydrating agent.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 251
Zusammenfassung:
Source: US2258774 A [EN] 1. An abrasive product comprising abrasive particles bonded with a synthetic resin, the said synthetic resin having incorporated and distributed in situ therein metallic particles having a melting 'point in the range of grinding temperatures of the abrasive product whereby the metallic particles serve as a lubricant in the grinding action of the abrasive product.
<table>
<thead>
<tr>
<th>Titel:</th>
<th>GRINDING WHEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patentnummer:</td>
<td>US2327846A</td>
</tr>
<tr>
<td>Anmeldung:</td>
<td>US19410374706 US19390291008</td>
</tr>
<tr>
<td>Priorität:</td>
<td>US19390291008 19390819 US19410374706 19410116</td>
</tr>
<tr>
<td>Patentfamilie:</td>
<td>US2327846A US2243049A</td>
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<tr>
<td>Anmelder:</td>
<td>NORTON CO</td>
</tr>
<tr>
<td>Erfinder:</td>
<td>BARNES CARL E KISTLER SAMUEL S</td>
</tr>
<tr>
<td>IPC-Notationen:</td>
<td>B24D0003-34</td>
</tr>
<tr>
<td>CPC-Notationen:</td>
<td>B24D0003-344 Y10S0524-925</td>
</tr>
</tbody>
</table>

**Zusammenfassung:**

Source: US2243049 A [EN] 1. As s new srticle cl manufacture, In abnslve body comprlsing abrasive grains, bond holding the abrasive gruns togethen there being pore spacesinthe; \$: &eel,nndsl1nelyd.lvidedlolid compoundwii
lsstronglysddinreactcln at grinding temperatures above 500° C. unoomblned with the abusive or bond ond available for reaction with l. metal work tlece
UUHX grinding when the grinding line glv ol! sparks, vis. sparks shove 500° C. In tempernture, and selected from the group consisting of the mhydrldee md meld salts ot sulphuric ond phosphoric acids

**Datum des Suchlaufs:** 07.04.2021

**Dokument Nr.:** 253
Zusammenfassung:

Source: US2377995 A [EN] 1. An abrasive article comprising abrasive grains bonded as a porous body by means of vitrified ceramic material and a filler incorporated in the pores comprising furfuryl alcohol polymerized with lignin

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 254
Titel: ABRASIVE MIX
Patentnummer: US2563774A
Anmeldung: US19480021551
Priorität: US19480021551 19480416
Patentfamilie: US2563774A
Anmelder: MONSANTO CHEMICALS
Erfinder: DEBING LAWRENCE M

IPC-Notationen: B24D0003-34
CPC-Notationen: B24D0003-344

Zusammenfassung:
Source: US2563774 A [EN] (Claim 1) 1. In a process for preparing an abrasive mixture, the steps which consist essentially of wetting the abrasive grains with a liquid from the group consisting of liquid phenol-aldehyde condensation products, liquid phenol-furfural condensation products, liquid urea-aldehyde condensation products, liquid melamine-aldehyde condensation products, liquid thiourea-aldehyde condensation products, dicyandiamide-furfural condensation products and silica aerogel thereby enhancing the free-flowing qualities of the abrasive mixture. Said silica aerogel being present in amounts ranging from 2 to 10 parts by weight per 100 parts of liquid agent.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 255
Zusammenfassung:
Source: US2806772 A [EN] (Claim 1) 1. An abrasive article consisting essentially of abrasive granules, a phenolic resin bond therefor and individual minute thin walled hollow spheres less than 0.025 inch in diameter distributed throughout the resin bond and between the abrasive granules, said minute walled hollow spheres constituting from 1 to 30% of the volume of the article.
Titel: Improvements in or relating to resin bonded abrasive articles
Patentnummer: GB789677A
Anmeldung: GB19550005095
Priorität: GB19550005095 19550221
Patentfamilie: GB789677A
Anmelder: TITAN ABRASIVES COMPANY
Erfinder: ZALUD CHARLES ALBERT

IPC-Notationen: B24D0003-34
CPC-Notationen: B24D0003-342

Zusammenfassung:
Source: GB789677 A [EN] An abrasive article comprises 160 parts by weight of a granular abrasive and a bonding agent consisting of 7 to 14 parts by weight of a thermosetting resin and from 67 to 95 per cent of the weight of the bonding agent of an inorganic filler. If required, a wetting agent, e.g. furfural, furfuryl, alcohol, or acetone may be incorporated. Specified resins are phenolaldehyde and amine-aldehyde resins. Abrasives specified are aluminium oxide, silicon carbide, boron carbide, corundum, garnet or emery. Specified fillers are cryolite, fluorspar, magnesium oxide or silica. In the example, 800 parts by weight of fused aluminium oxide grains were mixed with 20 parts by weight of a liquid Bakelite resin, and 150 parts by weight of cryolite or 30 parts of a Bakelite resin were added ('Bakelite' is a Registered Trade Mark), the whole thoroughly mixed and moulded and cured.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 257
Zusammenfassung:
Source: US3087803 A [EN] (Claim 1) 1. A resinoid bonded diamond grinding wheel composition consisting essentially of about 10% to about 30% diamonds, about 7 % to about 15 % of a phenol-aldehyde resinous bonding agent, about 10% to about 55% of a tough filler and about 5% to about 55% of a hard abrasive selected from the group consisting of titanium carbide, silicon carbide, tantalum carbide, tungsten carbide, zirconium carbide, chromium carbide, boron carbide, titanium nitride and aluminum oxide, said tough filler comprising a partly reduced fused mixture of zirconia and titania in which the mol. ratio of titania to zirconia is within the range of 1: 9 to 9: 1, the sum of said tough filler and said hard abrasive not exceeding about 75

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 258
Titel: ABRASIVE COMPOSITION WITH LIMESTONE AS THE POROSITY-INDUCING AGENT

Patentnummer: US3476537A
Anmeldung: US19660551879
Priorität: US19660551879 19660523
Patentfamilie: US3476537A
Anmelder: ACME ABRASIVE CO
Erfinder: MARKOTAN ROBERT J

IPC-Notationen: B24D0003-34  
CPC-Notationen: B24D0003-344

Zusammenfassung:
Source: US3476537 A [EN] ABSTRACT OF THE DISCLOSURE The abrasive composition contains granular abrasive material, granular limestone, a granular Aller and a binder. The abrasive and limestone grains are of the same order in size, while the Aller grains are much smaller size. The ratio by volume of abrasive and limestone in the composition approximates less than 50%: 10
Zusammenfassung:
Die Erfindung bezieht sich auf eine mit duroplastischem Kunstharz gebundene, heißgepreßte Schleifscheibe, die neben vollem Schleifkom Hohlkugeln aus einem geschmolzenen Schleifmaterial, sowie 5 bis 15 Gewichtsprozent Füllstoff für das Bindemittel und 0 bis 3 Gewichtsprozent CaO enthält.
Source: US3926585 A [EN] The loading of an abrasive belt with particles of a soft metal during grinding or polishing of the latter is sharply reduced, the amount of metal removed per unit time greatly increased, and the useful life of the belt improved if the abrasive grains on the belt are covered with an intimate mixture of a solid binder with finely dispersed wax particles. 9 Claims, No Drawings
Abrasive bodies are made contg. 44-60 vol. percent abrasive particles, 56-2 vol. percent binder and opt. up to 38 vol. percent pores. The binder used is a reaction prod. of an epoxy prepolymer with a phenolic prepolymer. The binder may also contain up to 30 percent filler. The epoxy phenolic binders are useful replacements for natural shellac in the prodn. of precision grindstones for the prodn. of articles with a high surface finish, such as disc brake discs. The synthetic binders show less variation in properties than natural shellac and cure more rapidly. Pref. binders are made from 5-20 weight percent of a liq. epoxy prepolymer with an epoxy equiv. wt. of 70-200, 80-40 weight percent of a powdered epoxy prepolymer with an epoxy equiv. wt. of 230-4000 and 10-55 weight percent of a powdered phenol formaldehyde prepolymer without a cross linking agent.
Zusammenfassung:
Zusammenfassung:
Source: DE2829609 A1 [EN] High strength reinforcing fibres, (I) having length greater than or equal to 10 mm and modulus of elasticity greater than or equal to 1 x 10^4 kp/mm², are incorporated in abrasive discs contg. abrasive grains, resin-esp. thermosetting resin binder and filler. The fibre reinforcement may consist of mono-crystal whiskers and/or polycrystalline metal whiskers and/or B fibres, partic. synthetic, inorganic fibres. Fibre adhesion in binder matrix is improved by providing the fibres with a surface coating having a high chemical and/or physical affinity to binder, e.g. by oxidn. Thus, the fibres may be high-strength C fibres, oxidised on surface, or may consist of drawn metal wires, esp. of higher alloyed C steel coated with a primer. Working velocity can be increased without increasing vol. proportion of reinforcing material in abrasive disc.
Zusammenfassung:
Source: DE20017092 U1 [MT] (Claim1) friction disk to drying cuts of hard materials, those as thin disk with a relationship diameter: Thickness by $2L \times 100$ is arranged and their hardened Korpus granular abrasive, filler, reinforcement fabric, polymer as purifying area screen end bonding agent matrix and structure pores exhibits, in the fact characterized that it is sealed with a sealing substance (7), water-free which can be processed, structure pores (6) and purifying area (10) closing.
ABRASIVE WHEELS, RINGS, LEAVES OR DISCS

DE1906721A1
DE19691906721
DE19691906721 19690206
DE1906721A1
3M CO
MINNESOTA MINING AND MFG
LOUIS BARATTO EUGENE
TRYGVE FREERKS CONRAD

B24D0003-34
B24D0007-00
B24D0003-344
B24D0007-00

The abrasive powder and, opt. fine graphite, are held in the pores of the bonding material which is essentially a urea-formaldehyde resin, the remainder of the pores are filled with the abrasive catalyst, e.g. paraffin etc., the gradual wearing away of the bonding releasing the abrasive as required.
Zusammenfassung:
Source: US2656654 A [EN] (Claim 1) 1. A grinding wheel comprising a disc with an offset hub and a central hole centrally located in the disc, said disc being made of abrasive grains bonded with a matured phenolformaldehyde resinoid, and said disc containing a last one reinforcement of woven glass cloth and containing at last of reinforcement nylon leno cloth, the glass cloth and the nylon leno cloth extending from hub to close to the periphery of the disc and the nylon leno cloth being closely adjacent to that side of the disc towards which the hub is offset

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 267
ABRASIVE PRINTED WITH AN ELECTRICALLY CONDUCTIVE INK

Source: US5137542 A [EN] A coated abrasive article having a printed coating of electrically conductive ink incorporated in the construction thereof, such that the buildup of static electricity during the use of the article is either reduced or eliminated. In another respect, a method to make the same is taught.
Titel: Resilient abrasive article with hard anti-loading size coating

Patentnummer: WO200003840A1

Anmeldung: WO1999US03659
EP19990907160
DE19996013349T
US20000535782
US19980116038
JP20000559968T
CA19992337081
AU19990026885
CN19998008639
BR1999P12069

Priorität: US19980116038 19980715
WO1999US03659 19990218
US20000535782 20000328

Patentfamilie: WO200003840A1
EP1097027B1
EP1097027A1
DE69913349T2
DE69913349D1
US6406504B1
US6059850A
JP2002520181T2
CA2337081C
CA2337081A
AU199926885A5
AU199926885A1
CN1309596A
CN1139463C
BRP9912069B1
BRP9912069A

Anmelder: 3M INNOVATIVE PROPERTIES CO
MINNESOTA MINING AND MFG

Erfinder: LISE J M
LISE JONATHAN M
MINICK C A
MINICK CHRIS A
MINIK C A

IPC-Notationen: B24D0003-34
B24D0003-34
B24D0011-00
B24D0011-00

CPC-Notationen: B24D0003-34
B24D0003-34
B24D0011-00
B24D0011-00
Zusammenfassung:

Source: US6059850 A [EN] A resilient abrasive article includes a resilient elongatable substrate, abrasive particles adhesively bonded to the substrate with a flexible make coat, and a hard size coat applied over the abrasive particles and flexible make coat. The size coat provides an anti-loading layer which is applied thinly enough to prevent the size coat from cracking and tearing the substrate during use.
Titel: COATED ABRASIVE ARTICLE CONTAINING AN ELECTRICALLY CONDUCTIVE BACKING

Patentnummer: WO9315879A1

Anmeldung: WO1993US01252
EP19930905028
US19950469595
JP19930514293T
CA19932128089
AU19930036175
KR19947002758
KR19940702758
BR1993P105871

Priorität: US19920834618 19920212
WO1993US01252 19930211
US19950469595 19950606

Patentfamilie: WO9315879A1
EP0630310A1
US5560753A
JP8502695T2
CA2128089A
AU199336175A1
KR957000152A
KR19957000152A
KR19950700152A
BRP9305871A

Anmelder: CPG HOLDINGS INC
MINNESOTA MINING AND MFG

Erfinder: BUCHANAN SCOTT J
MCALLISTER RICHARD G
NETTLESHP DAVID A
RUDE HAROLD E
SCHNABEL HERBERT W
SERCOMBE RICHARD C

IPC-Notationen: B24D0003-34
B24D0011-00
B24D0011-02

CPC-Notationen: B24D0003-344
B24D0011-02
Y10T0428-24355
Y10T0428-24372

Zusammenfassung:
Source: US5560753 A [EN] A coated abrasive article having a backing comprising a sufficient amount of an electrically conductive material therein to reduce the buildup of static electricity during the use of the article. In another aspect, a method of making the same is taught.
**Title:** ABRASIVE SUPPORT, ABRASIVE ARTICLE COMPRISING THE ABRASIVE SUPPORT, AND METHOD FOR THE PRODUCTION THEREOF

**Patentnummer:** WO2015079021A1

**Anmeldung:**
- WO2014EP75937
- EP20140815261
- DE201450011540T
- DE201310224549
- US20140039625

**Priorität:**
- DE201310224549 20131129
- WO2014EP75937 20141118
- EP20140815261 20141128
- WO2014EP75937 20141128

**Patentfamilie:**
- WO2015079021A1
- EP3074182B1
- EP3074182A1
- DE102013224549A1
- DE502014011540D1
- US10124467B2
- US2017028530A1

**Anmelder:** NEENAH GESSNER GMBH

**Erfinder:**
- DOEGE CHRISTINE
- KARL PETER
- NIENTIEDT JUERGEN DR

**IPC-Notationen:**
- B24D0003-34
- B24D0011-00
- B24D0011-02
- B24D0018-00

**CPC-Notationen:**
- B24D0003-348
- B24D0011-001
- B24D0011-002
- B24D0018-0027

**Zusammenfassung:**
Source: US2017028530 AA [EN] The invention relates to an abrasive support, to an abrasive article comprising such a support, to the method for producing the same, and to the use of the abrasive article. According to at least one embodiment, the abrasive support comprises an impregnated support material based on synthetic fibers. The impregnated support material has at least on one side having a surface roughness Rz of 100 micro m to 500 micro m, and having an Rmax of 250 micro m to 600 micro m. The support has an air permeability of at most 20 l/m²s

**Datum des Suchlaufs:** 07.04.2021

**Dokument Nr.:** 271
Titel: NONWOVEN ABRASIVE ARTICLES AND METHODS FOR MAKING AND USING THE SAME
Patentnummer: WO2004048042A1
Anmeldung: WO2003US33421
US20020304041
AU20030302424
Priorität: US20020304041 20021125
WO2003US33421 20031022
Patentfamilie: WO2004048042A1
US2004098923A1
AU2003302424A1
Anmelder: 3M INNOVATIVE PROPERTIES CO
Erfinder: HOOD SHERRI D
VAN LOC X
IPC-Notationen: B24D0003-34
B24D0011-00
B24D0018-00
CPC-Notationen: B24D0003-348
B24D0011-005
B24D0018-0027
Zusammenfassung:
Source: US2004098923 AA [EN] Nonwoven abrasive articles comprise a porous reinforcing material, a fiber web affixed to the porous reinforcing material, abrasive particles, and a non-elastomeric binder. Methods of making and using nonwoven abrasive articles are also disclosed
Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 272
Zusammenfassung:
Source: WO20128708 A1 [EN] A coated abrasive article comprises a backing having first and second opposed major surfaces. A make layer is bonded to the first major surface. Agglomerate grinding aid particles are directly bonded to the make layer. At least a portion of the agglomerate grinding aid particles comprise grinding aid particles retained in a binder, and are arranged according to an open predetermined pattern. Abrasive particles are directly bonded to the make layer in spaces between the agglomerate grinding aid particles. A size layer is directly bonded to the make layer, agglomerate grinding aid particles, and abrasive particles. A method of making a coated abrasive article, in which the agglomerate grinding aid particles are deposited onto a curable make layer precursor prior to depositing abrasive particles onto the curable make layer precursor in spaces between the agglomerate grinding aid particles is also disclosed.
Titel: Multilayered flexible abrasive containing a layer of electroconductive material

Patentnummer: DE1814901A1

Anmeldung: DE19681814901
US19730387748
19681216
19681219
19681220
AT19680012414
CH19680018533
ES19680361764
NL19680018221
SE19670017777

Priorität: SE19670017777 19671222
US19710162938 19710715
US19730387748 19730813

Patentfamilie: DE1814901A1
US3942959A
GB1256520A
FR1596208A
AT306573B
BE472573A
CH490936A
ES361764A1
NL155208B
NL6818221A
SE374296B

Anmelder: EKA FABRIKS AB
FABRIKS AKTIEBOLAGET EKA
MOREX A G

Erfinder: HENRY STRAND TORE GOESTA
LENNART MARKOEOE ERIC
MARKOO ERIC L
SANDELL THORSTEN W
STRAND TORE G H
WILHELM SANDELL TORSTEN

IPC-Notationen: B24D0003-34
B24D0003-34
B24D0011-00
B24D0011-00
B24D0011-00

CPC-Notationen: B24D0003-344
B24D0003-344
B24D0003-344

Zusammenfassung:
Source: US3942959 A [EN] The accumulation of electrostatic charges in an abrasive article having a flexible backing sheet, a layer of adhesive and abrasive grains embedded in the adhesive is prevented by incorporating an electroconductive metal pigment or ionizable salt in an inner layer of the article and sandwiching this layer between two layers of substantially lower electroconductance so as to insulate the inner layer.
SUPERSIZE COMPOSITION, ABRASIVE ARTICLE AND METHOD OF MAKING AN ABRASIVE ARTICLE

Patentnummer: WO2017180210A1
Anmeldung: WO2016US69266
EP20160829050
US2016092415
Priorität: US20160321985P 20160413
US2016092415 20161229
WO2016US69266 20161229
Patentfamilie: WO2017180210A1
EP3442749A1
US2020311118A1
Anmelder: 3M INNOVATIVE PROPERTIES CO
Erfinder: GORGAN ADRIANA C
JACOB CENI
JOHNSON JENNIFER L
YANG YUGEUN P

Zusammenfassung:
Source: US2020311118 AA [EN] Abrasive articles, along with related compositions and methods, are provided. The abrasive articles include a backing, abrasive layer, and supersize coat that includes calcium stearate and an ammonium salt of a modified styrene acrylic polymer. The supersize coat can be dried to a translucent film at temperatures well below the melting temperature of the binder without need for a surfactant. Advantageously, these abrasive articles can reduce swarf accumulation during an abrading operation and enhance cut performance while achieving a high degree of optical clarity.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 275
What I claim is: A method of reinforcing the surface particles of abrasive in a grinding wheel which consists in forcing a bar of Babbitt metal into engagement with the abrasive or grinding surface of said grinding wheel when the latter is in motion to remove metal from said bar and deposit a layer thereof upon said abrasive or grinding surface, whereby the surface particles of abrasive become partially surrounded with the Babbitt metal.
Zusammenfassung:

Source: US3081161 A [EN] (Claim 1) 1. In an abrasive article, an abrasive portion which consists essentially of diamond abrasive grains and a bond for said abrasive grains, said bond being selected from the class consisting of vitrified, thermoset resinoid, and metallic bonds and containing as an additive and essentially the sole nitride therein a small amount, from 1% up to about 5% by weight of the bond, of boron nitride distributed therein in finely divided form
METHOD FOR TREATING AN ABRASIVE ARTICLE, AND ABRASIVE ARTICLE

Patentnummer: WO2020109042A1
Anmeldung: WO2019EP81588
DE201810220672
Priorität: DE201810220672 20181130
Patentfamilie: WO2020109042A1
DE102018220672A1
Anmelder: BOSCH GMBH ROBERT
Erfinder: HUBER JOHANNES

IPC-Notationen: B24D0003-34
B24D0018-00
CPC-Notationen: B24D0003-34

Zusammenfassung:
Source: WO20109042 A1 [EN] The invention relates to a method for treating an abrasive article (10), wherein a release agent dispersion is applied onto at least one surface (28), which is provided for abrading, of the abrasive article (10 in order to produce a cover layer (30), wherein the release agent dispersion comprises at least one anti-adhesion agent. According to the invention, the release agent dispersion further comprises at least one film-forming agent. The invention further relates to a correspondingly produced abrasive article (10)

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 278
Zusammenfassung:

Source: US5135545 A [EN] The present invention employs poly (ethyloxazoline) as a temporary binder and lubricant during the preparation of greenware articles. According to the present invention, molten poly (ethyloxazoline) promotes the compressibility of the powder used to form the greenware article, thus improving the density and strength of both the greenware and the abrasive article. The molten poly (ethyloxazoline) acts as a lubricant to permit a more efficient grain rearrangement under applied pressure and thereby increases the average density of the greenware article by 6 to 8 percent as compared to standard cold pressing.
Titel: GRINDING WHEELS AND METHOD OF MAKING THEM

Patentnummer: US2745728A
Anmeldung: US19520301798
Priorität: US19520301798 19520730
Anmelder: CIE DES MEULES NORTON
            GEN MOTORS CORP
            NORTON CO
            VER DEUTSCHE METALLWERKE AG
Erfinder: BERGER RENE PAUL LOUIS
          IRANY ERNEST P

IPC-Notationen: B24D0003-34
                B60B0003-00
                B60B0003-02
                B60B0003-08
                C08L0061-00
                C08L0061-10
                F02B0019-00
                F02B0019-12
                F02B0023-08
                H02K0033-00
                H02K0033-12

Zusammenfassung:
Source: US2745728 A [EN] (Claim 1) 1. A process of making a phenol-formaldehyde bonded ringing wheel which comprises forming on sulphur particles a substantially continuous coating of a film forming substance in a state in which said substance is non-reactive to phenol-formaldehyde resins during the curing thereof, mixing the coated sulphur with abrasive grains and a reactive phenol-formaldehyde resin, molding a grinding wheel from the resultant mix, and curing the mix with heat to form a grinding wheel having good bond strength containing sulphur due to prevention of the deterioration, during said curing, of the resin bond by means of the non-reactive coating on the sulphur particles.
Zusammenfassung:

Source: US2940842 A [EN] (Claim 1) 1. What is claimed is: i. An abrasive article consisting essentially of abrasive grains, an organic bonding uniting the grains as an integral body and a metal silicon alloy dispersed throughout the bond mass, the metal silicon alloy containing from about 40% to about 80% silicon by weight and being from about 5% to about 50% by volume of the bond mass, the metal silicon alloy being an alloy of silicon with a member selected from the group consisting of iron, manganese, aluminum, chromium, nickel, vanadium, tungsten and zirconium, and the organic bond being a member selected from the group consisting of a phenolic resin, a melamine resin, an aniline resin and rubber.
Zusammenfassung:
Titel: Abrasive member of bonded aggregates in an elastomeric matrix

Patentnummer: DE1752612C2

Anmeldung: DE19681752612
US19750585465
FR19690020658
19690613
19690620
AT19680007794
CH19690009516
ES19690368558
NL19690009282
SE19690008288

Priorität: DE19681752612 19680621
US19730416830 19731119
US19750585465 19750610

Patentfamilie: DE1752612C2
DE1752612A1
US3982359A
GB1228319A
FR2011399A1
AT282386B
BE734872A
CH533496A
ES368558A1
NL165676C
NL165676B
NL6909282A
SE351203B

Anmelder: HCH LIPPERT
LIPPERT FIRMA HEINRICH
LIPPERT HEINRICH FA
ROC A G

Erfinder: ELBEL KARL
WOLFINGER KURT

IPC-Notationen: B24D0003-34
C08J0005-14
C09K0003-14

CPC-Notationen: B24D0003-342
C09K0003-1436

Zusammenfassung:

Source: US3982359 A [EN] Abrasive grains rigidly bonded to each other form aggregates which are dispersed in a resilient matrix of an abrasive wheel so that the aggregates do not significantly interfere with each other's individual movement under grinding stresses against the resilient restraint of the matrix. The wheels remove metal from a workpiece much faster and lose less abrasive material than corresponding wheels in which the same abrasive particles are individually embedded in the same matrix.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 284
Zusammenfassung:

Claim 2. The method of preventing swelling during the making of an abrasive article comprising the steps of mixing abrasive grains with a solid unconverted phenol-formaldehyde resin powder, a liquid plasticizer and dry calcium oxide, CaO, shaping an article therefrom and subsequently heating the same to a temperature above 100°C. at which temperature the resin is converted to an infusible condition, and the resin is dehydrated as it cures by combining H2O with CaO.
Zusammenfassung:
Claim 1. An abrasive composition comprising abrasive grains, a potentially reactive phenolic resin and a reactive magnesium oxide in finely comminuted form.
Titel: ABRASIVE ARTICLES
Patentnummer: US2371700A
Anmeldung: US19430505945
Priorität: US19430505945 19431012
Patentfamilie: US2371700A
Anmelder: CARBORUNDUM CO
Erfinder: MARTIN HARRY C
UPPER FREDERICK A

IPC-Notationen: B24D0003-34
C08L0061-00
C08L0061-10

Zusammenfassung:
Source: US2371700 A [EN] 1. An abrasive article comprising abrasive grains and a bond therefor comprising a phenol resinoid modified by a metal selected from the group consisting of titanium, vanadium, chromium, manganese, iron, cobalt, and nickel, said metal constituent being so finely divided and incorporated into the resinoid bond as to have lost its physical identity as discrete particles to the extent that it is invisible at magnifications of 500 times.

Datum des Suchlaufes: 07.04.2021
Dokument Nr.: 287
MULTICRYSTALLINE DIAMOND ABRASIVE COMPOSITION AND ARTICLE

Resin bonded abrasive articles such as grinding wheels utilizing diamonds as the abrasive wherein from 15 to 45 percent of the diamonds are multicrystalline in nature rather than being single crystal diamonds. This application is a continuation-in-part of my copending application Ser. No. 371,802, filed June 1, 1964 and now abandoned.
Source: US3691707 A [EN] Improved rotary cutting apparatus and method of making the same incorporates a thin deposited layer of diamond particles in nickel disposed about the periphery of a rotatably body. The deposited layer is exposed beyond the periphery of the body during the fabrication process to provide high-speed cutting apparatus for use on semiconductor materials.
Title: GRINDING WHEEL

Patent number: US2488276A

Application number: US19430515907

Priority: US19430515907 19431228

Patent family: US2488276A

Applicant: NORTON CO

Inventor: ERICKSON JOHN R

IPC Notation: B24D0007-00

CPC Notation: B24D0007-02

Abstract:

Source: US2488276 A [EN] 1. A grinding wheel comprising a resinoid back presenting a ring-shaped securing face and a resin-bonded abrasive annulus spaced a short distance from the aforesaid securing face and having a ring-shaped securing face that is of lesser width than the width of the securing face of said resinoid back and a resinoid stress-distributing annulus interposed in the space between said first-mentioned securing face and said abrasive annulus and presenting annular faces respectively matching in width the different widths of said two securing faces and being joined thereto and integrally united therewith and having a cross-section that varies substantially progressively from the lesser width of said one of its securing faces to the greater width of the other securing face thereby to transmit the substantial grinding stresses exerted upon the abrasive annulus to said back and distribute them throughout the larger area of the securing face between the resinoid back and said resinoid annulus, and said resinoid annulus being cured to a porosity between about 4% and 15%.
Titel: ABRASIVE MEDIUM

Patentnummer: DE2025204C3

Anmeldung: DE1971213126
DE19702025204
US19710174655
US197101115164
GB19710033315
GB19700060238
FR19710032576
FR19700045628
AT19700011112
AT19710005728
CH19700018881
CH19710010290
ES19710195054U
ES19710207685U
IT19710007446
NL19710000262
NL19710010302

Priorität: DE19702025204 19700523
DE1971213126 19710511

Patentfamilie: DE2025204C3
DE2123126A1
US3785094A
US3762894A
GB1310649A
GB1263889A
FR2137407B2
FR2092296A5
FR2137407A2
AT307912B
AT316344B
CH541392A
CH558236A
ES195054Y
ES207685Y
ES195054U
ES207685U
IT997022A
NL152189B
NL7100262A
NL7110302A

Anmelder: ALFRED RUGGEBERG
HANS RUGGEBERG
JAN RUGGEBERG
RUEGGEBERT AUGUST
RUGGEBERG A
TOM RUGGEBERG

Erfinder: DR HOLZHAUER RUDOLF ING

IPC-Notationen: B24D0007-00
B24D0007-02
B24D0011-00

CPC-Notationen: B24D0007-02
B24D0011-00
Zusammenfassung:

Source: US3785094 A [EN] A flexible grinding tool made up a synthetic resin impregnated fiberglass mat with a layer of abrasive grains attached to both surfaces of the mat by a synthetic resin binder containing short fibers of glass, asbestos, ceramic material or graphite therein.
Titel: Cutting master and method of making cutting master for erosion machining

Patentnummer: US4132038A

Anmeldung: US1977077243

Priorität: US19750612894 19750912

Patentfamilie: US4132038A

Anmelder: EASCO SPARCATRON INC

Erfinder: O CONNOR THOMAS J

IPC-Notationen: B24D0007-00, B24D0007-18, B24D0018-00

CPC-Notationen: B24D0007-18, B24D0018-00

Zusammenfassung:
Source: US4132038 A [EN] A cutting master for total form abrasion machining a predetermined shape in a friable material including a body having a surface which is substantially the mirror image of a shape to be machined by abrasion, which surface is abrasive, is different in size from the shape to be abrasion machined by a predetermined amount, and includes a flat portion having a dimension related to the difference in size between the predetermined shape and the abrasive surface

Datum des Suchlaufs: 07.04.2021

Dokument Nr.: 292
Titel: ABRASIVE OR REFRACTORY ARTICLES AND METHOD OF MAKING THE SAME

Patentnummer: US1785102A
Anmeldung: US19280274352
Priorität: US19280274352 19280501
Patentfamilie: US1785102A
Anmelder: CARBORUNDUM CO
Erfinder: KENYON SHERMAN S WALKER PRESCOTT H

IPC-Notationen: B24D0007-00 B24D0007-00
CPC-Notationen: B24D0007-00 B24D0007-00

Zusammenfassung:
Source: US1785102 A [EN] 1. An abrasive article comprised of granular material and a binder, and having a liller in the pore space therein substantially throughout the mass and having a permeability less than fifty cubic centimeters

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 293
METHOD FOR depositing METAL HOLDING AND / OR SKINS ON A Grundkoerper AND BY THIS METHOD PRODUCED DIAMANTWERKZUG (Machine translation)

Titel: METHOD FOR depositing METAL HOLDING AND / OR SKINS ON A Grundkoerper AND BY THIS METHOD PRODUCED DIAMANTWERKZUG (Machine translation)

Patentnummer: DE1900787A1
Anmeldung: DE19691900787
Priorität: US19680396633 19680109
Patentfamilie: DE1900787A1
Anmelder: DENTISTS SUPPLY CO
Erfinder: ANDREW KRODER ERNEST

IPC-Notationen: B24D0007-00 B24D0018-00
CPC-Notationen: B24D0007-00 B24D0018-00

Zusammenfassung:
Source: DE1900787 A1 [MT] Process for depositing metal holding and / or cover layers on a basic body, in particular for fixing diamond particles in the basic body of a diamond-Sohleif or cutting tool, in which the prepared according to their size diamond particles initially on the well-prepared Aufnahmeflaeche the basic body before recorded over continuous and then embedded in the formation of the holding layer in them and they must be connected to the basic body, wherein the formation of the holding layer of metal of high tensile strength of this in the vapor state in a vacuum teilohen on the diamond and on the Aufnahmeflaeche the basic body completed superimposed and lattice-like Oberflaechenstruktur of deposition between adjacent diamond or at least part of them depressions on the surface of the holding and / or outer layer and are formed by the chip space, where is the grinding or cutting a workpieces resulting chip material collected temporarily until dropping

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 294
Zusammenfassung:
Source: WO18130237 A1 [EN] The invention relates to a roughing disk for machining material surfaces, comprising a disk-shaped main body which comprises a central opening, through which an axis of rotation passes, for the direct or indirect connection of a driveshaft of a tool, at least one grinding layer which comprises a first material mixture including at least one first grinding additive, and a stabilizing core for stabilizing the roughing disk, said stabilizing core being associated with the at least one grinding layer and being disposed peripherally adjacent to the central opening. The stabilizing core comprises a second material mixture, which comprises at least one second grinding additive different from the first grinding additive
Source: DE2226744 A1 [EN] The disc comprises flexible paper, vulcanised fibre or textile substrate and sprinkled with corundum or SiC secured to the substrate with the aid of animal glue or a thermoset resin (eg PF); and also comprising one or more coating of thermosets (the top coating containing abrasive material), specifically the top coating consists of alternating zones of varying bonding thickness. The difference between zones of low and those of high bonding thickness is of the order of one-half the average grain size of the abrasive used, preferentially 0.02-0.5mm, and the width of the zones of high bonding thickness is 2.50mm. Used for grinding steels, Ti- and Al-alloys. High grinding efficiency is obtained.
Titel: ELASTIC GRINDING ELEMENT AND METHOD FOR PRODUCING IT

Patentnummer: EP0095055B1

Anmeldung: EP19830104209
DE19833376055T
DE19823219567
US198304696955
AT19830104209T

Priorität: DE19823219567 19820525
DE19833376055T 19830429
EP19830104209 19830429

Patentfamilie: EP0095055B1
EP0095055A3
EP0095055A2
DE3219567A1
DE3376055D1
US4539017A
AT33106E

Anmelder: ELBEL SCHLEIFMITTEL GMBH DR
SEA SCHLEIFM ENTW ANWEND
SEA SCHLEIFMITTEL ENTWICKLUNG

Erfinder: AUGUSTIN RAINER

IPC-Notationen: B24D0011-00
B24D0013-00
B24D0013-02
B24D0018-00

CPC-Notationen: B24D0013-02
B24D0018-00

Zusammenfassung:

Source: US4539017 A [EN] An elastic grinding element for form-true grinding including a supporting layer of elastomer material and an adhesive grit layer bound to the supporting layer and having an active grinding surface made of a hardened mixture of binder and abrasive grit. The process for making the grinding element includes providing a mold having a shape constructed to produce a desired shape for the grinding element, putting the mixture of binder and abrasive grit and the elastomer material in the mold, and accelerating the mixture of binder and abrasive grit and the elastomer material while in the mold

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 297
METHOD OF MANUFACTURING ELASTIC GRINDING BODIES

Source: EP0147633 A2 [EN] 1. Method of manufacturing resilient grinding bodies for grinding subsequent to moulding, utilising a negative mould, which grinding bodies, in their surface region, contain abrasive grain clusters which are anchored in an elastomeric base body, characterised in that the elastomeric base body (12) is initially manufactured with recesses in its surface by means of the negative mould, and then these recesses are filled with a mixture of abrasive grain and binding agents which, in their hardened state, form the abrasive grain clusters (11), so that the grinding body is provided with a continuous surface.
Titel: COATED ABRASIVE
Patentnummer: US2322156A
Anmeldung: US19410424998 19460704
Priorität: US19410424998 19411230
Patentfamilie: US2322156A FR941695A
Anmelder: BEHR MANNING CORP
Erfinder: OGLESBY NICHOLAS E

Zusammenfassung:
Claim 1. A coated abrasive comprising a flexible backing element, a coating of abrasive grains anchored thereon by an abrasive grit-bonding organic adhesive selected from a group consisting of synthetic resins and animal glues, said adhesive bond comprising layers, one of which anchors the abrasive grain coating to the backing and another of which is superimposed on and among the grains as a sizing coat. at least one of the layers of the organic adhesive being modified by a substantial percent by volume of an Inert, relatively non-absorbent, relatively non-fibrous filler, said filler being in a comminuted state and not more than substantially 35 percent by weight of said filler remaining on a 270 mesh screen having a mesh opening of 53 microns and the finer not less than substantially 65 percent by weight of said filler which passes the said screen having an average surface diameter in the range of substantially 5.5 to 40 microns.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 299
Zusammenfassung:

Source: US4525403 A [EN] Stabilized pile articles, characterized in that the stabilizing has been carried out on the upper surface by means of latices, dispersions and/or resins or by a heat treatment, a process for its production characterized in that an unstabilized pile article is stabilized, and its use for the treatment of surfaces.
Method of making abrading tools

Source: US5895612 A [EN] An abrasive tool includes a rotatable hub from which extends a bundle of plastic abrasive monofilaments. The bundle has a high filament count and each filament includes a substantial amount of abrasive uniformly entrained therein. After the bundle is secured to the hub, the tool is placed in a mold completely enclosing at least the projecting bundle and a foamable elastomer is injected into the mold to produce a light density cellular matrix bond encapsulating the filaments. The preferred plastic for the plastic monofilaments is nylon 6-12 and the preferred elastomer is a low density (2-20 lbs/cu/ft) polyurethane. The cellular matrix bond for the preferred applications upon wear does not produce a liquid phase at even high tool pressures. Radially extending enlarged coolant passages may be formed during the encapsulation and injection process step. The tool may be in disk, cup or twisted stem form.
Zusammenfassung:

Source: US4504283 A [EN] Extremely fine abrasive particles are incorporated in an elastomeric resin body or coating to produce abrasive articles exhibiting cushioned or resilient yielding qualities having a dual response to in-service conditions. These performance characteristics are accomplished by a structure whose working surface and underlying supporting means produce two distinct and complementary abrading actions, one hard enough to sharpen a hardened cutting tool and to smooth the adjacent surface, and a second of being virtually simultaneously micro-deformable, via the mechanisms of cold flow, at or near maximum or optimum sharpening pressure. Such abrasive articles allow limited local displacement of a volume of the abrasive surface layer in a continuous wave to lift the surface at the tool edge to a height slightly beyond the plane of the edge being sharpened to 'wipe' and so refine the extreme edge of the cutting tool and to remove the 'wire-edge' as only a three-dimensional form of contact will accomplish. The articles of this invention are particularly suited to the performance of honing, stropping and lapping operations.

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 302
Method of **grinding** a surface of a workpiece and a **tool** for carrying out the method

Source: US3918220 A [EN] Grinding a surface of a workpiece with **abrasive** particles by impregnating a pad of reticulated foam-like material with the **abrasive** particles, whereby the **abrasive** particles occupy interstices in the foam-like material, the **abrasive** particles and the foam-like material respectively having hardnesses greater and less than that of the workpiece surface; effecting relative rubbing movement between the pad and the workpiece, whereby the foam-like material will be worn away during the rubbing movement to expose fresh **abrasive** particles in the rubbing surface of the pad and to open interstices in the foam-like material of the pad to the rubbing surface thereof, and applying a liquid to the rubbing surface of the pad, whereby material worn away from the pad and the workpiece during the rubbing action will be washed from the rubbing surface of the pad, through the opened interstices in the pad of foam-like material. Only some of the interstices in the pad are occupied by **abrasive** particles and those interstices which are not occupied by abrasive particles intercommunicate to define a continuous throughway extending between the rubbing surface of the pad and a face thereof remote from said rubbing surface, thereby to define a path through which said washing liquid can flow to or from the rubbing surface.
Zusammenfassung:
Source: US2825638 A [EN] (Claim 1) 1. The method of making a grinding wheel having grinding characteristics similar to those of a hard rubberbonded grinding wheel which comprises uniformly-nixed and coating abrasive grains with a powdered vulcanizing agent, wetting the resulting coated abrasive grains with a solution of a liquid butadiene-acrylonitrile copolymer in furfural, incorporating the resulting wetted abrasive grains with a dry powdered blend of a powdered thermosetting phenol-aldehyde resin, lime and filler in such a way as to coat the wetted grains with said blend and form a free-flowing pourable granular mix, filling a pre-heated mold with said free-flowing pourable granular mix, heating the mix at relatively low pressure in said mold at a temperature of at least 300° F. until the bond solidifies by gelling and partially sets up, confining the resulting shape under positive mechanical pressure of at least 1,000 lbs. per square inch, and heating it while so confined at a temperature of at least 300° F. until curing of the bond is completed, the temperature at no time being so high as to cause heat deterioration of the bond to occur.
Titel: ABRASIVE WHEEL COMPOSITION
Patentnummer: US2943926A
Anmeldung: US19580749328
Priorität: US19580749328 19580718
Patentfamilie: US2943926A
Anmelder: CINCINNATI MILLING MACHINE CO
Erfinder: GOEPFERT GEORGE J

IPC-Notationen: B24D0018-00 C08J0005-14
CPC-Notationen: B24D0018-00

Zusammenfassung:
Source: US2943926 A [EN] (Claim 1) 1. The method of making abrasive granules coated with a filled condensation resin and adapted to be molded to form a resin-bonded grinding wheel having a relatively high ratio of bond to abrasive and a relatively low volatile content which comprises. Wetting the surfaces of the granules of an abrasive material with a bond-adhesion-promoting agent selected from the group consisting of: said condensation resin in liquid form, an organic solvent having an appreciable solvent power for said condensation resin and a mixture of said liquid resin and solvent mixing with the wetted granules a first portion...

Datum des Suchlaufs: 07.04.2021
Dokument Nr.: 305
Titel: REINFORCED ABRASIVE ARTICLES AND INTERMEDIATE PRODUCTS

Anmelder: 3M CO MINNESOTA MINING AND MFG

Erfinder: JAMES RANKIN WALTER TUNGSETH BARRY F

IPC-Notationen: C08J0005-14 C08K0007-00 C08K0007-14 C08L0067-00 C08L0067-06

CPC-Notationen: C08K0007-14 C08L0067-06 Y10T0428-31511 Y10T0442-2992

Zusammenfassung:

Source: US2880080 A [EN] (Claim 1) 1. A self-supporting felted mat suitable for impregnation with a hardenable liquid resinous matrix resin in providing a strong reinforced warp-resistant resinous sheet material, said mat comprising a randomly oriented uniform mixture of 20-80 percent by weight of short bundles of aligned glass fibers substantially completely encased in a sheaf of flexible film-forming polymer and correspondingly 80-20 percent by weight of short moisture-swellable impregnation resistant cotton thread segments.
Zusammenfassung:
Zusammenfassung:

Source: US2559664 A [EN] (Claim 1) 1. The method of making an **abrasive** article which comprises coating **abrasive** grains, in the order named, with a solvent for a heat-hardenable resin, a powdered heat-hardenable resin, an aqueous dispersion of a thermoplastic resin selected from the group consisting of polymers and copolymers of vinyl compounds, and finally with a second layer of the powdered heat-hardenable resin, drying the thus coated grains to remove substantially all of the water therefrom, forming an article from a mass of such resin coated **abrasive** grains, and heating the thus formed article at such temperatures and for such times as to heat-harden the heat-hardenable resin and cause the finely divided particles of thermoplastic resin to soften and aggregate into larger particles and become distributed through the mass of the heat-hardened resin.
Zusammenfassung:
Source: US2814554 A [EN] (Claim 1) 1. Method of making organic bonded grinding Wheels which comprises, preparing a mix of abrasive grains and rubber composition by first thoroughly coating all of the individual grains with liquid rubber and thereafter adding thereto solid components of rubber composition in finely divided form, said solid components of rubber composition containing atleast 10% by weight of sulphur on the rubber molecule of the rubber composition, and thoroughly mixing said solid components with the abrasive grains individually coated with liquid rubber until each grain is substantially completely covered with the said solid components, preparing a mix of abrasive grains and phenol-formaldehyde resin composition by Erst thoroughly coating all of the individual grains with : 1 solvent for reactive solid finely divided phenol-formaldehyde resin composition, then adding said solid finely divided phenol-formaldehyde resin composition thereto and thoroughly mixing it with said grains coated with resin solvent until each grain is substantially completely covered with the said reactive solid phenol-formaldehyde resin composition, then thoroughly mixing from 10% to 90% by weight of the mix of abrasive grains and unvulcanized rubber composition with its complement of the mix of abrasive grains and reactive phenol-formaldehyde resin composition to make a thorough mixture of the two mixes, then charging a mold with said mixture and forming a grinding wheel by pressure and heat to compact the mixture and to vulcanize the rubber and to react the resin to thermo-irreversible stage.
Zusammenfassung:
Source: US3387957 A [EN] (Claim 1) 1. Microcrystalline, sintered bauxite abrasive grain of controlled grit size having a longitudinal to transverse dimensional ratio substantially greater than 1:1 and a uniform cross section normal to the length thereof.