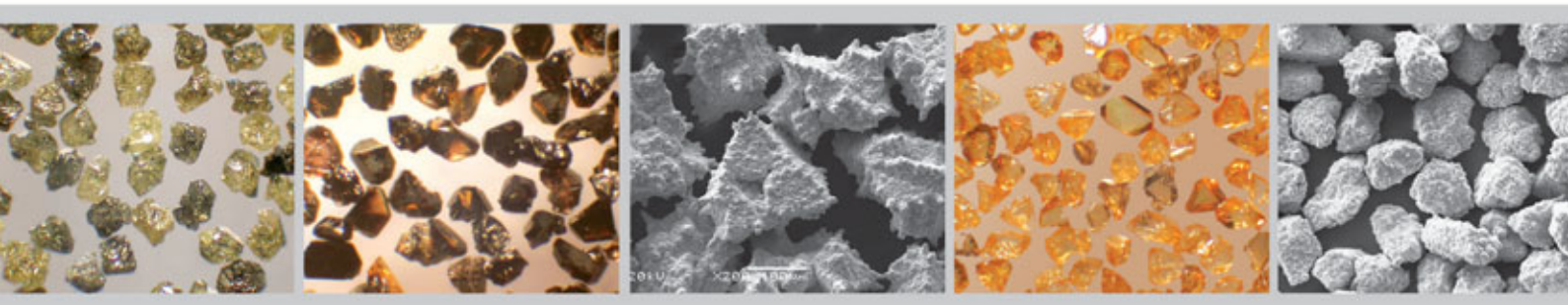
diprotex



diprotex

DIAMOND & CBN

GRINDING OUT A WONDERFUL WORLD

In 1997, Diprotex started to export resin bond diamond and CBN made by our plan in America.

In 2003, Diprotex established new plant for cooating Ni, Cu, Ti products process.

In 2004, Diprotex became one leading supplier and in resin bond diamond, metal bond diamond, micron diamond powder, CBN and coating products.

Today, Diprotex aims at being an expert and guide in grinding super abrasives. This means Diprotex provide not only a whole series of grinding superabrasive materials, but also a exhaustive indication on how to use in grinding wheels and tools.

- **RBV Resin Bond Diamond**
- **Coated RBV Diamond & Micron Powder**
- **Cubic Boron Nitride (CBN)**
- **Coated CBN & Micron Powder**
- **Diamond & CBN Micron Powder**
- **SDR Saw Diamond**
- **MD grinding Metal Bond diamond**

TÜV CERT

ISO 9001:2000
Certificat : 01 100 047007

Product Brief

RBV series diamond is widely used in resin and vitrified bond systems. It is the polycrystalline particle composed of some subcrystals with mosaic structure, irregular shapes and concaved rough surface.

Its unique micro-fracturing characteristic brings optimal performance in grinding efficiency, surface finish and tool life, and is especially introduced in machining tungsten carbide, ceramics, glass and other nonferrous materials.
RBV diamond family has 6 kinds of products. RBV-S is the highest friability, and RBV-B is the highest toughness.

Product Purpose

Vit Vitrified Bonds

M Metal Bonds

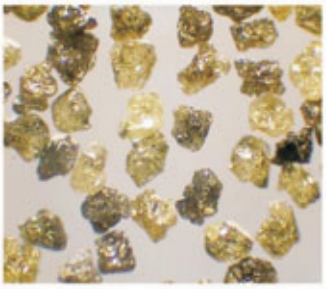
R Resin Bonds

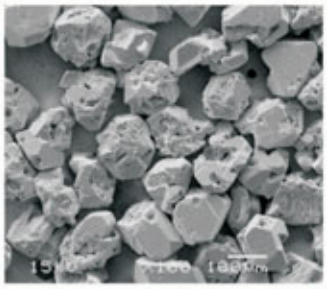
Medium Toughness and Friability

RBV-X

Vit R

Medium friable crystals, irregular shape, dark green colour, perfect self-sharpen ability. It is an ideal choice when grinding removal rate and tool life need to be considered synchronously.

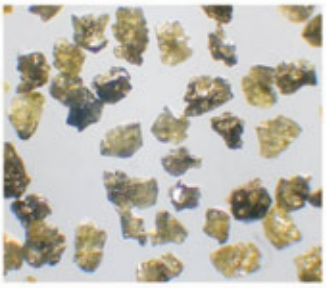


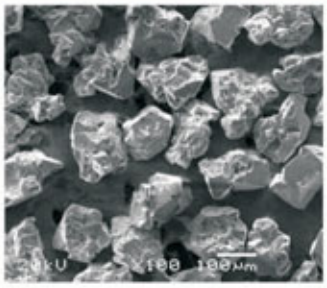


RBV-F

Vit R

Medium friable crystals, lower toughness than RBV-X, light gray colour. Because of excellent particle self-sharpen ability, RBV-F brings more wonderful performance in grinding removal rate than RBV-X.



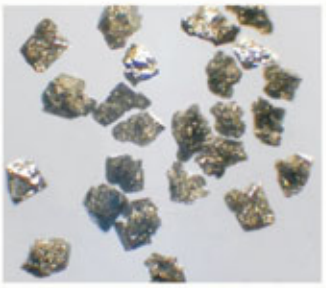


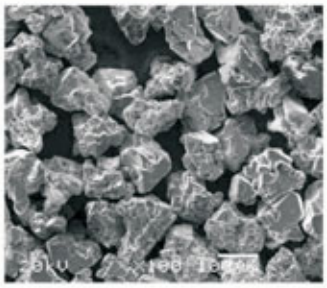
High Friability

RBV-S

Vit R

The highest friable crystals in RBV family, gray colour, extreme self-sharpen ability, ideal for high precision grinding application in demanding materials where stringent dimension and surface quality is required.





RBV RESIN BOND DIAMOND

Product Brief

RBV series diamond is widely used in resin and vitrified bond systems. It is the polycrystalline particle composed of some subcrystals with mosaic structure, irregular shapes and concaved rough surface.

Its unique micro-fracturing characteristic brings optimal performance in grinding efficiency, surface finish and tool life, and is especially introduced in machining tungsten carbide, ceramics, glass and other nonferrous materials.
RBV diamond family has 6 kinds of products. RBV-S is the highest friability, and RBV-B is the highest toughness.

Product Purpose

Vit Vitrified Bonds

M Metal Bonds

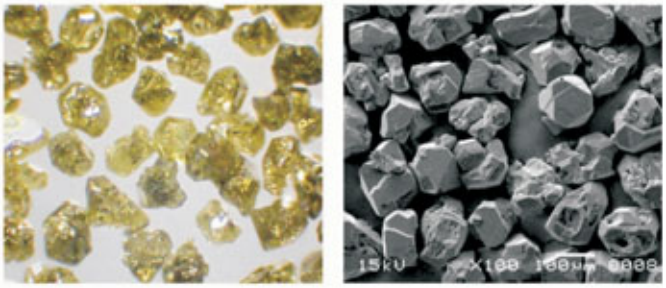
R Resin Bonds

High Toughness

RBV-H

Vit R

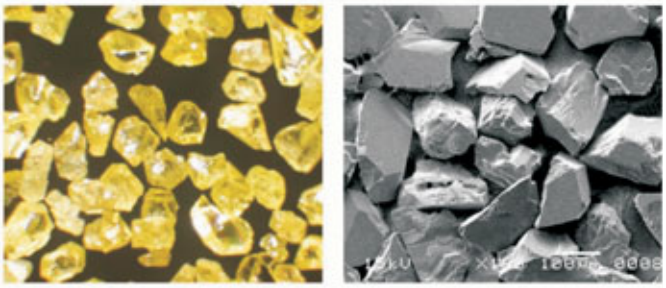
High tough crystals, with blocky shape, light green colour. RBV-H is used in the wheel where demanding applications, high production rates and long tool life are required.



RBV-A

R

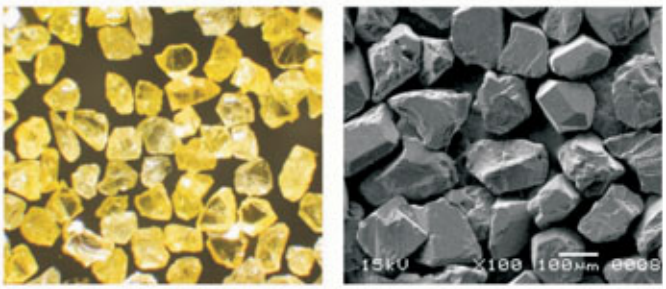
High toughness crystals, with angular shape, yellow-green colour. Due to its high sharp cutting edges, toughness and impact resistance, RBV-A is recommended for heavy duty grinding application.



RBV-B

M R

The highest toughness in RBV family, semi-blocky shaped crystal, yellow-green colour. Due to its characteristic in regenerate new cutting edges, high impact resistance , It is recommended in resin bond system for stone polishing, tungsten carbide, PCD, PCBN grinding.



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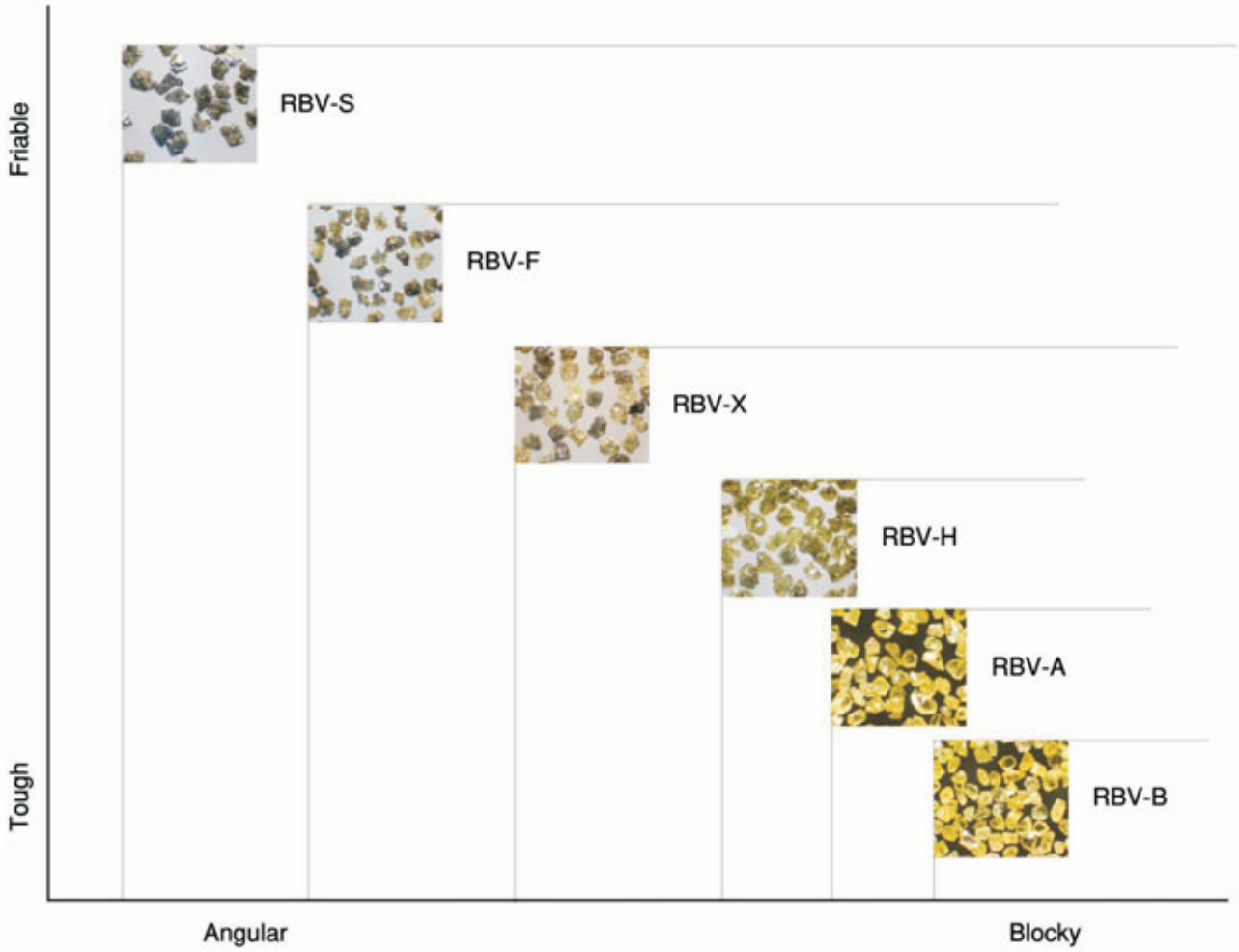
RBV Diamond Friability Index



Available Mesh Size

ANSI Mesh (FEPA)	60/80 (D252)	80/100 (D181)	100/120 (D151)	120/140 (D126)	140/170 (D107)	170/200 (D91)	200/230 (D76)	230/270 (D64)	270/325 (D54)	325/400 (D46)	400/500
RBV-X			●	●	●	●	●	●	●	●	●
RBV-F		●	●	●	●	●	●	●	●	●	●
RBV-S	●	●	●	●	●	●	●	●	●	●	●
RBV-H	●	●	●	●	●	●	●	●	●	●	●
RBV-A	●	●	●	●	●	●	●	●	●	●	●
RBV-B	●	●	●	●	●	●	●	●	●	●	●

COATED RBV DIAMOND & MICRON POWDER

Product Brief

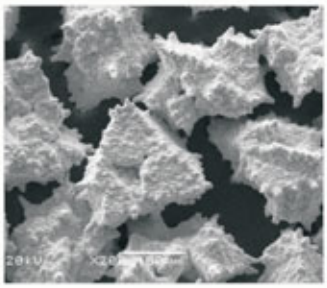
In phenolic resin bonds and polymide bonding systems, RBV series diamond is always recommended to use coated nickel products. Coated nickel RBV series can obviously prolong tools life, raise cutting efficiency, improve surface finish of workpieces.
We also provide coated nickel products for VRM & VSM resin bond diamond micron powder.

Medium Toughness and Friability

RBV-GN

R

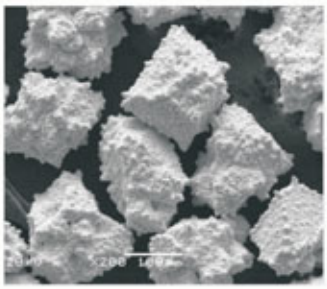
Nickel based coating
Coating level at 56%
Most widely used in phenolic bonds , mainly for wet grinding of ceramics, tungsten carbides, it is the best choice when both of long tools life and high removal rates need to be considered.
RBV-GCu is the coated copper 50% of RBV-G.



RBV-XN

R

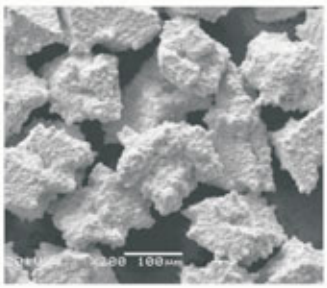
Nickel based coating
Coating level at 56%
Widely used in phenolic bonds , mainly for wet grinding of ceramics, tungsten carbides, because of its slight higher toughness than RBV-GN, it has a slight lower removal rates than RBV-GN, but a lower price than RBV-GN.
RBV-XCu is the coated copper 50% of RBV-X.



RBV-LN

R

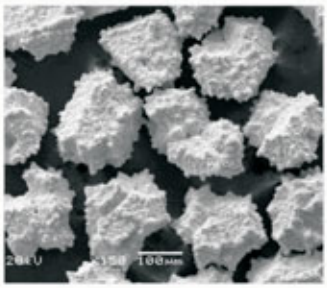
Nickel based coating
Coating level at 56%
Widely application in wet grinding of ceramics and tungsten carbides, higher friability than RBV-GN, a ideal choice when you need higher removal rates than RBV-GN.
RBV-LN30 is product of coating nickel at 30%.
RBV-LCu is the coated copper 50% of RBV-L.



RBV-FN

R

Nickel based coating
Coating level at 56%
Widely application in wet grinding of ceramics and tungsten carbides, provide you another choice besides RBV-LN if you need a slight higher toughness than RBV-LN.
RBV-FN30 is product of coating nickel at 30%.
RBV-FCu is the coated copper 50% of RBV-F.

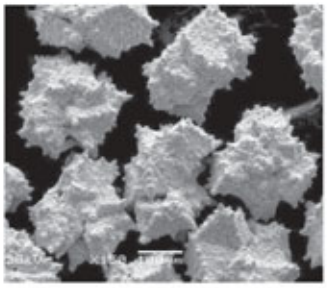


High Friability

RBV-SN

R

Nickel based coating
Coating level at 56%
Owns the highest friability in RBV family, Controlled micro-fracturing characteristics, provides extended wheel life coupled with low grinding power. Especial coating technology enhances crystal retention and extracts heat from the grinding interface, provides wonderful superior surface finishes.
RBV-SCu is the coated copper 50% of RBV-S.

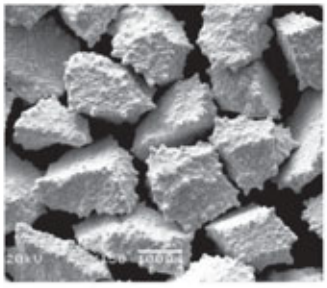


High Toughness

RBV-AN

R

Nickel based coating
Coating level at 56%
Application in preliminary grinding of stone, ceramic, tungsten carbide, where the surface precision of workpieces is not extremely required. It is your first consideration when you need low abrasives cost but large quantity consumption.
RBV-AN30 is a 30% coating level, which is also a product that always is considered, it has lower cost than RBV-AN, more quick heat dissipation.
RBV-ACu is the coated copper 50% of RBV-A.

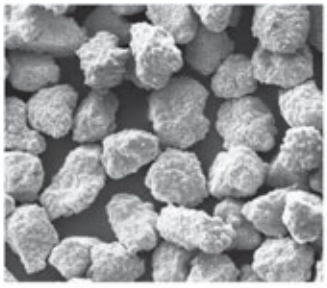


Coated diamond micron powder

VRM N & VSM N

R

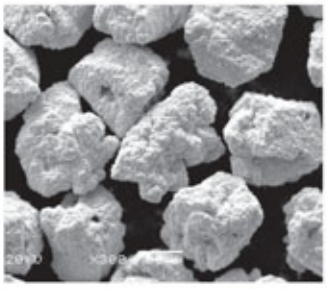
Nickel based coating,
Coating level at 56%
VRM N is the coated nickel product of VRM . VSM N is the coated nickel product of VSM .
Widely used in polishing glass, tungsten carbide and ceramic for enhancing the retention of diamonds. Improves grinding wheel life and bring good surface finish. Besides coating nickel 56%, we also provide coating nickel 30%.



Coated Copper RBV series

R

Copper based coating
Coating level at 50%
Because of excellent heat dissipation ability of Copper, RBV series diamond also is always used after coating copper. Besides in wet grinding application, coated copper RBV series diamond is the best choice in dry phenolic grinding. It can prevent thermal workpiece damage, reduce grinding energy and improve tool life.



CUBIC BORON NITRIDE (CBN)

Product Brief

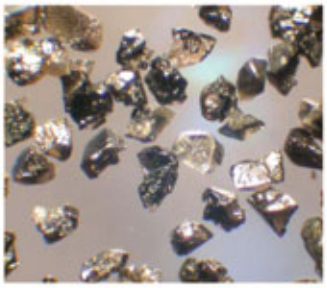
CBN is second in hardness only to diamond in the world. With very high thermal stability and resistance to chemical attack, CBN is widely used to machine variety of ferrous materials in the manufacturing industries where diamond abrasives are not normally suitable.

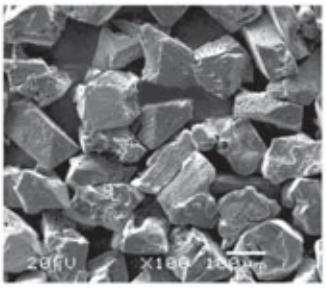
Product Purpose

Vit	M	R	El
Vitrified Bonds	Metal Bonds	Resin Bonds	Electroplated

CBN-10 R

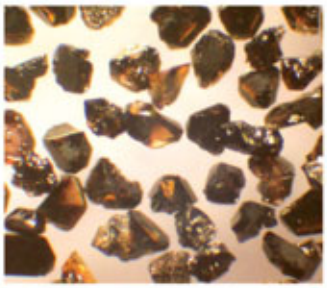
Black, friable, irregular shaped particles, economic type product. Strongly is recommended in resin bond grind wheel application where large quantity and low cost of CBN abrasive are required simultaneously.

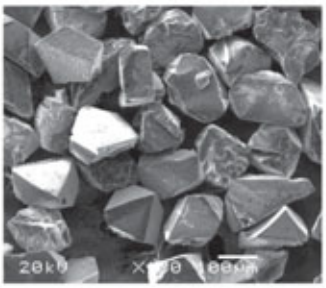




CBN-90 Vit

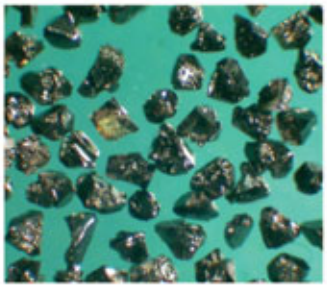
Black, semi-blocky monocrystalline products, medium toughness. Its unique micro-fracturing characteristics bring wonderful performance in wheel life, grinding efficiency and surface finish. CBN-90 is the product that is most widely used in resin and vitrified bond systems.
CBN-90N(60% by weight) is its coated nickel product.

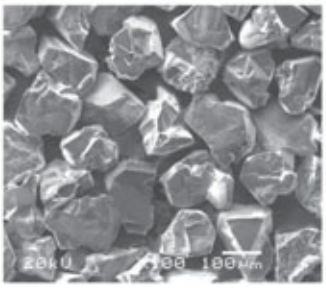




CBN-150 Vit R

Black, medium fracture strength, blocky particles, high thermal stability is recommended in resin and vitrified bond. On base of its higher toughness than CBN-90, you can consider CBN-150 when long tool life is required.
CBN-150N (60% by weight) is its coated nickel product.





Product Brief

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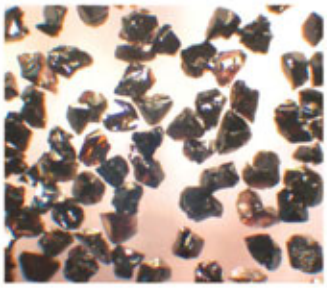
Product Purpose

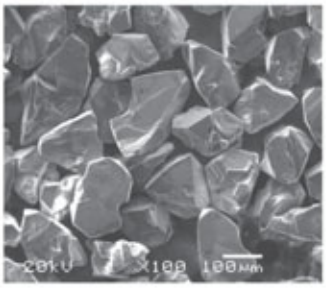
Vit	M	R	El
Vitrified Bonds	Metal Bonds	Resin Bonds	Electroplated

CBN-190

Vit M El

Black, very high toughness and thermal stability, regular shape, monocrystalline and microfracture method provide ideal tool life, suitable for vitrified, metal bond system, as well as for electroplated tools. CBN-190N(60% by weight) is its coated nickel product.

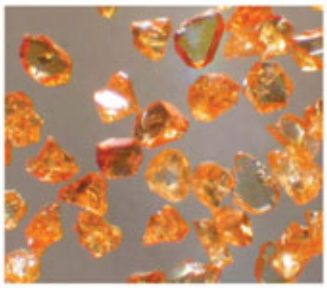


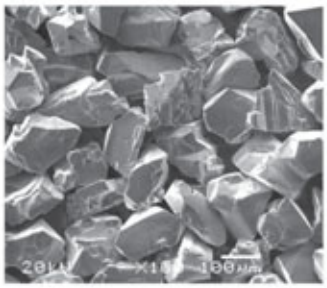


CBN-20

R

Amber, friable, and irregular shaped particles, economic type products, recommended for resin bond system application where large quantity and low cost of CBN abrasive are required simultaneously.

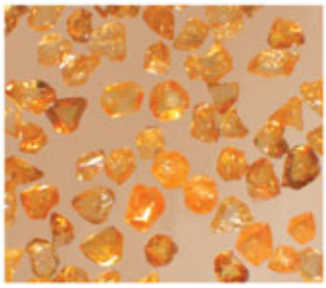


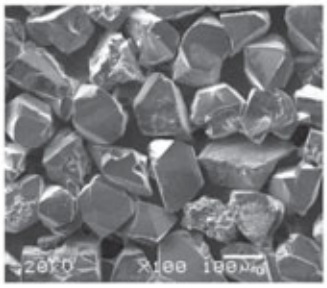


CBN-130

Vit El

Amber, semi-blocky monocrystalline product, medium toughness, unique micro-fracturing characteristics provide another choice to you besides CBN-90, used in vitrified bond system. CBN-130N (60% by weight) is its coated nickel product and used in resin bond system.





CUBIC BORON NITRIDE (CBN)

Product Brief

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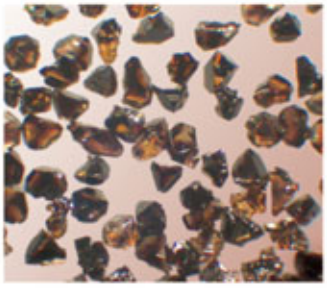
Product Purpose

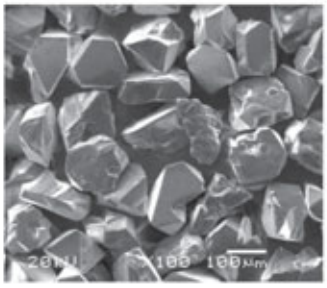
Vit	M	R	El
Vitrified Bonds	Metal Bonds	Resin Bonds	Electroplated

CBN-220

Vit M

Brown, transparent monocrystal, its toughness is second only to CBN-300 in CBN family. High thermal stability is used in vitrified and metal bond systems, provide long wheel life.
CBN-220N (60% by weight) is its coated nickel product.
CBN-220T is its coated titanium product.

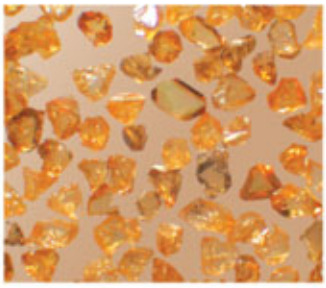


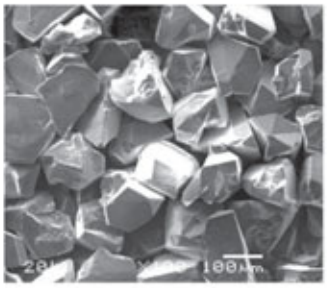


CBN-300

Vit M El

Gold, monocrystal, blocky particles, the highest fracture strength in our monocrystalline CBN family, very high thermal stability, most widely used in electroplated tools, provide very long wheel life in grinding of hard tool steel, carbon and alloy steel, cobaltbased superalloys.
CBN-300T is its coated titanium product.

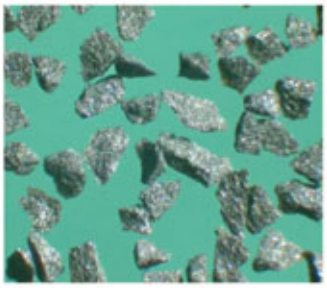


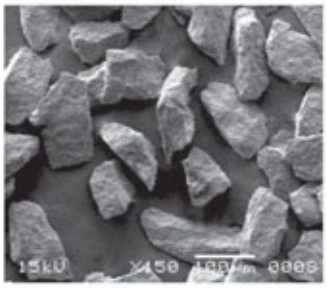


CBN-350

Vit M

The highest fracture strength in all of our CBN products, polycrystalline, and black particles, irregular shape, its unique nano-fracturing, special surface texture, extremely high toughness make it terrific performance in demanding high removal rate application. It is widely used in metal and vitrified bond systems.





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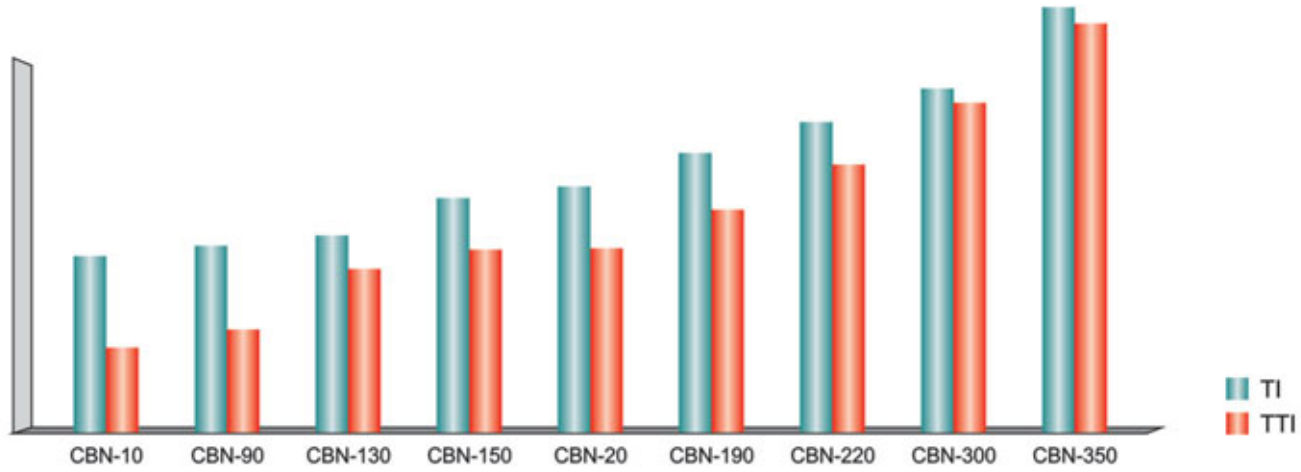
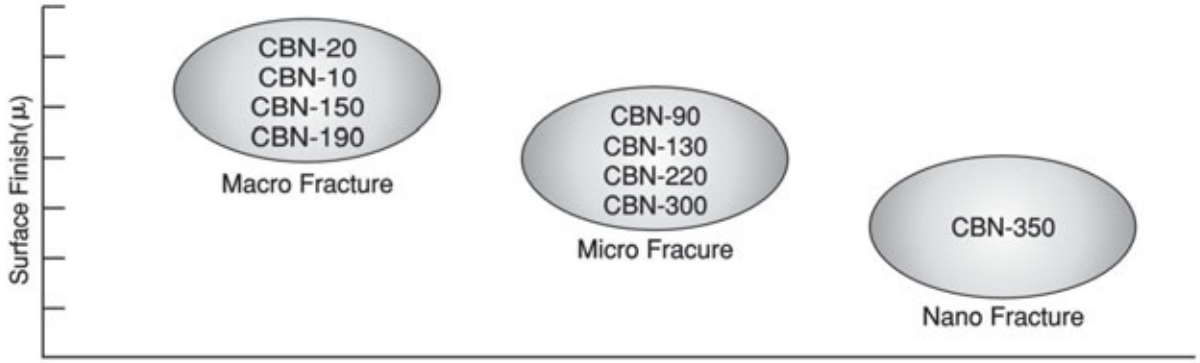
Crystal Strength Index



Influence of CBN's Fracture Form on Surface Finish



Available Mesh Size

ANSI Mesh (FEPA)	25/30 (D711)	30/40 (D602)	40/50 (D427)	50/60 (D301)	60/80 (D252)	80/100 (D181)	100/120 (D151)	120/140 (D126)	140/170 (D107)	170/200 (D91)	200/230 (D76)	230/270 (D64)	270/325 (D54)	325/400 (D46)	400/500
CBN-10					●	●	●	●	●	●	●	●	●	●	●
CBN-90					●	●	●	●	●	●	●	●	●	●	●
CBN-150					●	●	●	●	●	●	●	●	●	●	●
CBN-190			●	●	●	●	●	●	●	●	●	●	●	●	●
CBN-20				●	●	●	●	●	●	●	●	●	●	●	●
CBN-130				●	●	●	●	●	●	●	●	●	●	●	●
CBN-220				●	●	●	●	●	●	●	●	●	●	●	●
CBN-300				●	●	●	●	●	●	●	●	●	●	●	●
CBN-350	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Product Brief

In phenolic and polyimide resin bonds systems, CBN products is introduced strongly to use coated nickel product who can provide superior performance in enhancing crystal retention, extracting heat from the grinding interface and improving wheel life.

Product Purpose

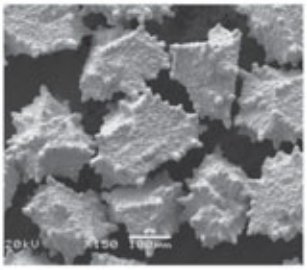
Vit	M	R	El
Vitrified Bonds	Metal Bonds	Resin Bonds	Electroplated

Coated Nickel CBN

CBN-90N

R

Standard nickel based coating
Coating level at 60%
It is nickel coated product of CBN-90. Most widely used in phenolic and polyimide resin bond system. It provides increased retention of CBN crystal, longer productive life and more consistent performance.

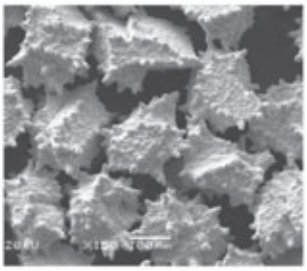


CBN-90N

CBN-150N

R

Standard nickel based coating
Coating level at 60%
It is nickel coated product of CBN-150. Used in resin bond system, it can bring longer wheel life, lower grinding energy, in the meanwhile, because of terrific heat distracting, the surface finish of workpieces will be improved greatly.

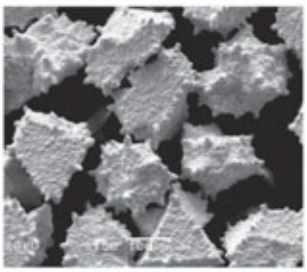


CBN-150N

CBN-190N

R

Standard nickel based coating
Coating level at 60%
It is nickel coated product of CBN-190. For resin bond system application, is designed for heavy duty fields where more longer wheel life, more consistent performance are required.



CBN-190N

Product Brief

In phenolic and polyimide resin bonds systems, CBN products is introduced strongly to use coated nickel product who can provide superior performance in enhancing crystal retention, extracting heat from the grinding interface and improving wheel life.

Product Purpose

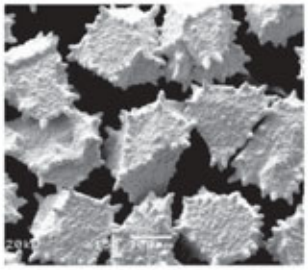
Vit Vitrified Bonds
M Metal Bonds
R Resin Bonds
El Electroplated

Coated Nickel CBN

CBN-220N

R

Standard nickel based coating
Coating level at 60%
It is nickel coated product of CBN-220. With very high particle strength and sharp cutting edge, CBN-220N is ideal for demanding high performance in resin bond system than uncoated particles.



CBN-220N

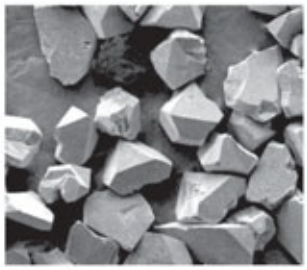
Coated Titanium CBN

CBN-x T

CBN-190T CBN-220T
CBN-300T CBN-350T

Vit M

Coating level at 2%
In metal and vitrified bond system, CBN products with high toughness and thermal stability is recommended to use coated Titanium products, it can enhance greatly particle retention, bring long wheel life.



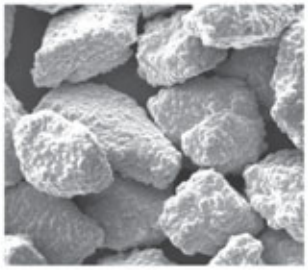
CBN-300T

Coated Nickel CBN Micron powder

R

CBN-AMN & CBN-BMN

Coating level at 60%
CBN-AMN is coated nickel of CBN-AM.
CBN-BMN is coated nickel of CBN-BM.
They are used in resin bond application. The textured nickel coating provides increased mechanical retention of the crystal, dissipates heat from the grinding zone, bring wonderful result and morelonger tools life in lapping and polishing.



CBN-BMN

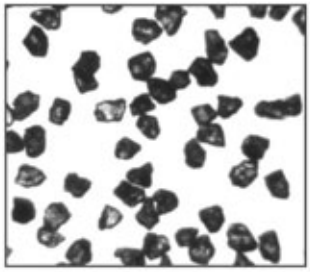
Resin Bond Diamond Micron Powder

Resin bond diamond micron powder is derived from resin bond diamond RBV series. They are recommended as glass, tungsten carbide, PCD, ceramic polishing and lapping. We provide two kinds of resin bond diamond micron powders---- VRM and VSM.

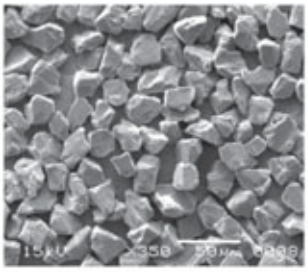
DF1

R

VRM micron powder is derived from RBV-F, grey and white colour, blocky shape, excellent performance in glass, ceramic polishing and lapping. Its coated nickel product are VRM N (56%) and VRM N30 (30%).



VRM

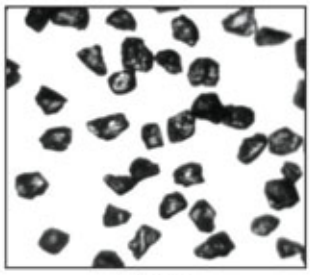


SEM

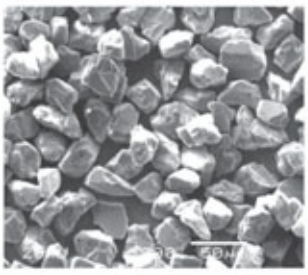
VSM

Vit R

VSM micron powder is derived from RBV-X. White colour, blocky shape. On base of its more higher toughness than VRM, strongly recommended for resin and vitrified bond l application where higher wheel life is required besides considering removal rate and surface finish. It coated nickel product are VSM N (56%) and VSM N30 (30%).



VSM



SEM

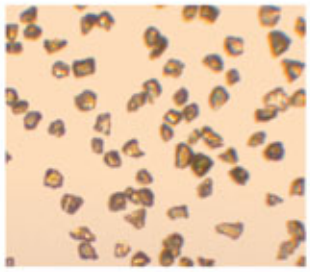
Metal Bond Diamond Micron Powder

Metal bond diamond micron powder is derived from synthesized monocrystalline diamond. On base of their high toughness, are recommended for processing silicon wafer, slicing and polishing stone, PCD, ceramics. We provide two kinds of micron powders-- VMM & EMM.

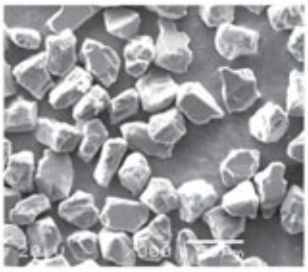
DF5

M R

VMM micron powder has high toughness, blocky shape, white colour, very tightly controlled size wafer, fit for polishing and lapping silicon wafer, slicing, glass and ceramics, etc. Its coated nickel product are VMM N (56%) and VMM N30 (30%).



VMM

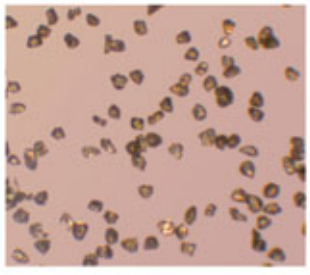


SEM

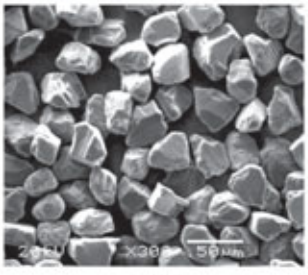
EMM

M R

EMM micron powder is economic grade product, white colour, blocky shape, slight wider size distribution than VMM, fit for polishing and lapping ceramics, PCD, stone, etc, where material cost is a key factor to consider.



EMM



SEM

CBN Micron Powder

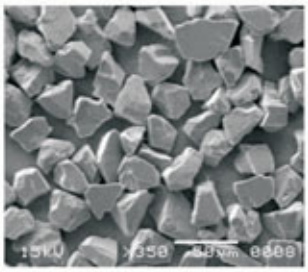
CBN micron powder is derived from CBN grit by milling process. We provide two kinds of CBN micron powders- CBN-AM and CBN-BM. They are ideally suited for grinding, lapping and fine finishing of hard ferrous materials.

CBN-AM

R

Light amber colour, is derived from CBN-20 that has medium toughness, ideal application in resin bond systems for polishing and lapping. We also provide coated nickel 60% product named CBN-AMN.

CBN-AM

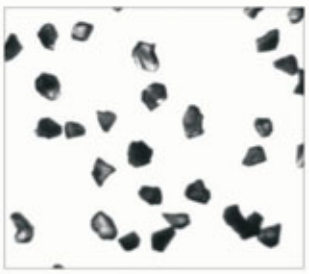


SEM

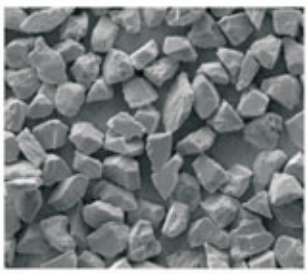
CBN-BM

Vit R

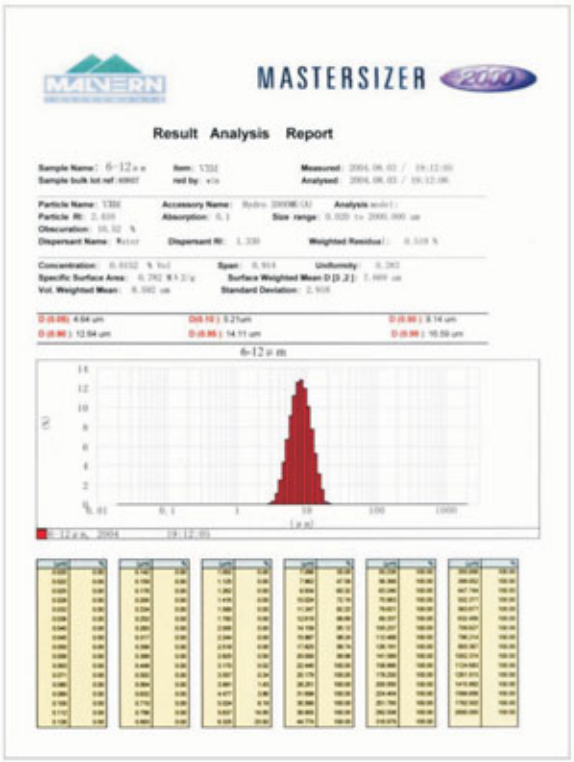
Grey-black colour, irregular shape, is derived from CBN-190 that has very high toughness and thermal stability, is used in resin and vitrified bond systems, ideal application for polishing and lapping in hard tool steels and alloy steels. We provide its coated nickel 60% product named CBN-BMN.



CBN-BM



SEM



diprotex

DP TYPE MICRON DIAMOND

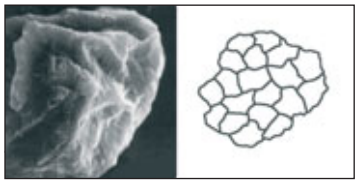
Mypolex polycrystalline diamond, precision size range

Appearance

DP diamond is dark gray to black in color.

Particle structure

DP diamond is formed by explosion synthesis, leading to a polycrystalline particle structure. Each diamond particle consists of countless microcrystallites, about 20 nanometers in size. Polycrystalline diamond features no cleavage planes, which makes the particles monocrystalline particles.



Characteristics

DP diamond is precision graded to tight specifications, making it the preferred choice for high-quality, high-performance applications.
Due to the absence of cleavage planes, DP diamond is equally hard and tough in all directions. This allows for higher process pressures and thus increased material removal rates in lapping and polishing applications.

The rough, micro-structured particle surface leads to higher abrasion rates on both hard and soft materials. The typically blocky and regular particle shape yields better polishing results compared to equally-sized monocrystalline diamond.

Typical applications

Lapping and polishing of:
- sapphire
- synthetic gemstones
- ceramic oxides
- hard disk media texturing
- hard disk GMR heads
- fiberoptic components
- metalographic specimen
- composite materials
- tungsten carbide
- silicon carbide
- die castings

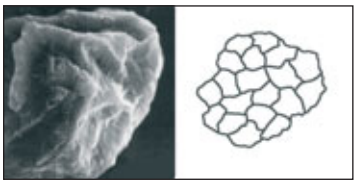
Mypolex polycrystalline diamond, standard size range

Appearance

FG diamond is dark gray to black in color.

Particle structure

FG diamond is a polycrystalline diamond, formed by explosion synthesis. Each diamond particle consists of countless microcrystallites, about 20 nanometers in size. Polycrystalline diamond features no cleavage planes, which makes the particles tougher, compared to monocrystalline particles.



Characteristics

FG diamond is particularly suited for high-performance lapping applications. Thanks to its polycrystalline structure without cleavage planes, FG diamond is considerably stronger than monocrystalline diamond. This allows for higher process pressures and thus increased material removal rates in lapping applications.

For final polishing steps we recommend the use of precision graded DP type polycrystalline diamond. While DP diamond features the same high material removal rate as FG diamond, it produces a better surface quality.

Typical applications

Lapping and polishing of:
- sapphire
- ceramic oxides
- tungsten carbide
- composite materials

DF1/DF5 Sizes / Specifications

Size	Median (50% Value)	Median - Tolerance	Upper Limit (99% Value) max.
0-0.05	0.025	0.020 - 0.030	0.09
0-0.1	0.050	0.040 - 0.060	0.15
0-0.15	0.075	0.060 - 0.090	0.20
0-0.2	0.090	0.070 - 0.110	0.25
0-0.25	0.125	0.105 - 0.145	0.33
0-0.35	0.18	0.155 - 0.205	0.42
0-0.5	0.21	0.18 - 0.24	0.53
0.25-0.5	0.35	0.31 - 0.39	0.70
0.25-0.75	0.50	0.45 - 0.55	0.90
0.5-1	0.71	0.65 - 0.77	1.30
0.75-1.25	1.00	0.95 - 1.05	1.7
1-1.5	1.19	1.13 - 1.25	2.0
1-2	1.42	1.35 - 1.49	2.3
1.25-2.25	1.69	1.61 - 1.77	2.6
1.5-2.5	2.00	1.90 - 2.10	3.0
1.5-3	2.39	2.27 - 2.51	3.5
2.25-3.5	2.84	2.70 - 2.98	4.1
2.5-4	3.37	3.20 - 3.54	4.9
3-5	4.02	3.82 - 4.22	5.8
4-6	4.87	4.63 - 5.11	6.8
4.5-7	5.7	5.42 - 5.98	7.9
5.5-8	6.8	6.46 - 7.14	9.2
6-10	8.1	7.70 - 8.50	10.9
8-12	9.6	9.12 - 10.08	12.9
10-16	12.5	11.9 - 13.1	17.9
10-20	15.0	14.2 - 15.8	21.5
15-25	20.0	19.0 - 21.0	26.5
20-30	25.0	23.7 - 26.3	32.5
20-40	30.0	28.5 - 31.5	41.5
30-40	35.0	33.2 - 36.8	46.0
35-45	40.0	38.0 - 42.0	51.0
40-60	47.0	44.6 - 49.4	62.0
50-70	57.0	54.1 - 59.9	72.0
60-80	66.0	62.7 - 69.3	82.0

Other sizes on request. Please contact us for your specific requirements.

DP Sizes / Specifications

Size	Median (50% Value)	Median - Tolerance	Upper Limit (99% Value) max.
0-0.05	0.025	0.020 - 0.030	0.09
0-0.1	0.050	0.040 - 0.060	0.15
0-0.15	0.075	0.060 - 0.090	0.20
0-0.2	0.090	0.070 - 0.110	0.25
0-0.25	0.125	0.105 - 0.145	0.33
0-0.35	0.18	0.155 - 0.205	0.42
0-0.5	0.21	0.18 - 0.24	0.53
0.25-0.5	0.35	0.31 - 0.39	0.70
0.25-0.75	0.50	0.45 - 0.55	0.90
0.5-1	0.71	0.65 - 0.77	1.30
0.75-1.25	1.00	0.95 - 1.05	1.7
1-1.5	1.19	1.13 - 1.25	2.0
1-2	1.42	1.35 - 1.49	2.3
1.25-2.25	1.69	1.61 - 1.77	2.6
1.5-2.5	2.00	1.90 - 2.10	3.0
1.5-3	2.39	2.27 - 2.51	3.5
2.25-3.5	2.84	2.70 - 2.98	4.1
2.5-4	3.37	3.20 - 3.54	4.9
3-5	4.02	3.82 - 4.22	5.8
4-6	4.87	4.63 - 5.11	6.8
4.5-7	5.7	5.42 - 5.98	7.9
5.5-8	6.8	6.46 - 7.14	9.2
6-10	8.1	7.70 - 8.50	10.9
8-12	9.6	9.12 - 10.08	12.9
10-16	12.5	11.9 - 13.1	17.9
10-20	15.0	14.2 - 15.8	21.5

Polycrystalline diamond sizes larger than 10-20 are available as FG sizes.
Other sizes on request. Please contact us for your specific requirements.

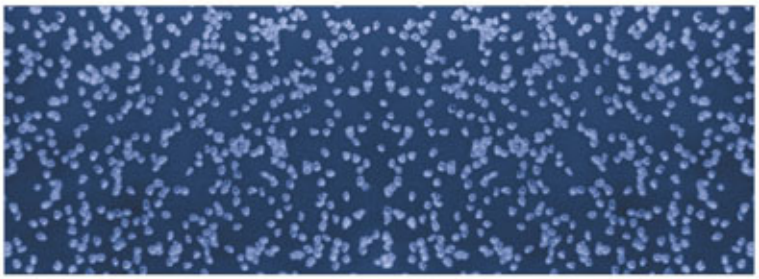
FG Sizes / Specifications

Size	Median (50% Value)	Median - Tolerance	Upper Limit (99% Value) max.
0.25	0.30	0.25 - 0.35	0.75
0.5	0.55	0.40 - 0.70	1.3
1	1.10	0.90 - 1.30	2.7
1.5	1.60	1.35 - 1.85	3.3
2	2.10	1.81 - 2.39	4.0
3	3.2	2.8 - 3.6	5.5
4	4.2	3.7 - 4.7	7.5
5	5.3	4.7 - 5.9	9.0
6	6.3	5.6 - 7.0	10.5
9	10.0	8.8 - 11.2	15.0
12	14.0	12.4 - 15.6	20.0
15	17.5	15.4 - 19.6	26.0
30	32.0	28.2 - 35-8	48.0

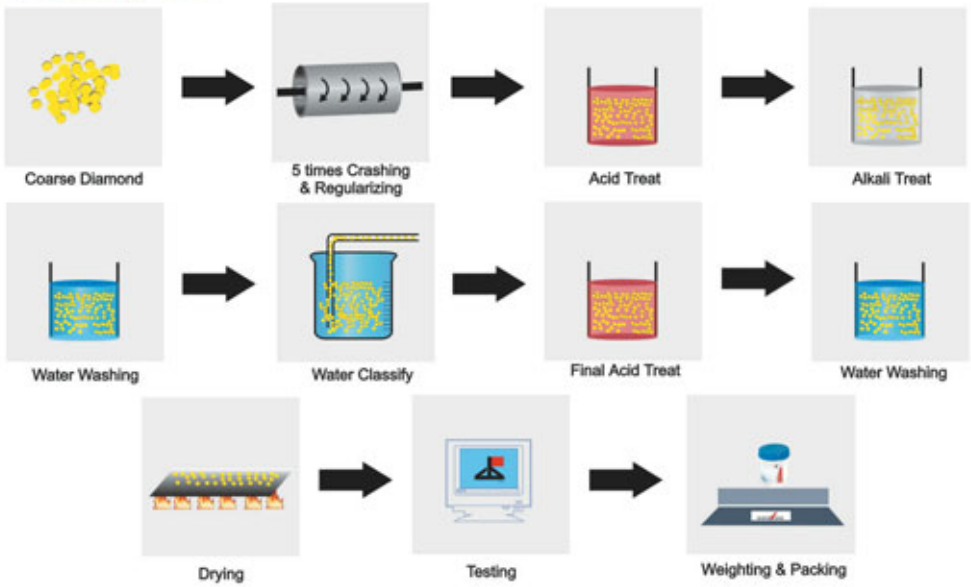
Other sizes on request. Please contact us for your specific requirements.

Synthetic diamond micropowder is widely used in machine, aviation and space, glass, ceramics, optical instrument, electronics, oil, geology and other many industrial sections.

It is very ideal material for precision grinding , polishing and lapping hard alloy, ceramics, gems, optical glass, etc.



Typical processing line:

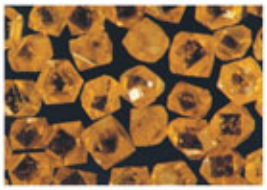
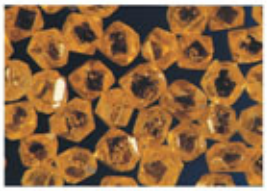
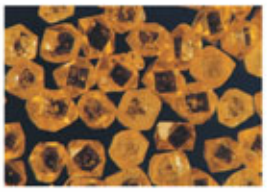
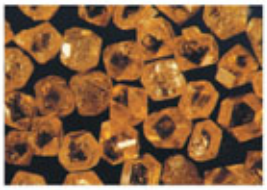
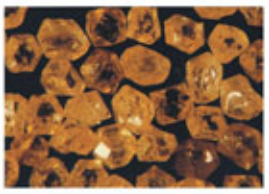


DIPROTEX® SAW DIAMOND

Excellent SDR Series Diamond --- coming from two presses making equipment.

SDR series diamond owns very high TI and compressive strength, it displays ripe producing technology and keep very stable product quality,

Detail Description

	SDR-2170 Perfect crystal shape with very high TI and TTI, suitable to make cutting tools , dressing tools, such as saw blade ,disc, drill bit, etc.
	SDR-2160 Very high TI and good TTI, suitable to make the cutting tools , such as single and multi saw blades, etc.
	SDR-2150 Perfect crystal shape with high TI. Suitable to make the cutting tools for granite and the tools for ceramics,etc.
	SDR-2140 Good crystal with smooth surface and middle strength, suitable to make the cutting and profiled tools for average granite, ceramic .
	SDR-2130 Good crystal shape , middle strength, suitable to make the cutting tools for marble and the metal bonded tools, such as grinding wheels.

Application Tools

Item \ Grade	SDR-2170	SDR-2160	SDR-2150	SDR-2140	SDR-2130	SDR-2120
Circular Saws						
Frame Saws						
Wire Saws						
Dressing Tools						
Free-cutting Tools						
Electroplated Tools						
Grinding And Polishing						
Vitrified Grinding						

Working Materials

Item \ Grade		SDR-2170	SDR-2160	SDR-2150	SDR-2140	SDR-2130	SDR-2120
Stone	Quartzite						
	Granite						
	Gabbro						
	Syenite						
	Diorite						
	Basalt						
	Terrazzo						
	Limestone						
	Lath						
	Sandstone						
Asphalt	Heavily Reinforced						
	Medium Hard Reinforced						
	Medium Reiforced						
	Soft Aggregate						
	Lightly Reiforced						
	Hard Aggregate						
Concrete	Medium Hard Reinforced						
	Medium Reiforced						
	Soft Aggregate						
	Lightly Reiforced						
Refractor	Silicon						
	Ceramics						
	Glass						
	Fibre Glass						

MD METAL BOND DIAMOND

Product Brief

From optimum shaped crystals with the lowest inclusion level, very high thermal strength, irregular shaped crystals with high friable, very rough surface, MD series diamond offer a wide application in resin, metal, vitrified and electroplated bond systems grinding variety non-ferrous materials.

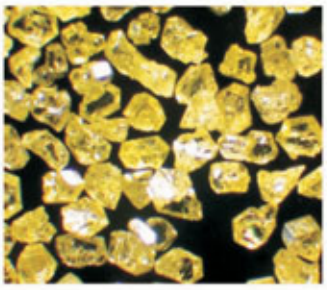
Product Purpose

Vit Vitrified Bonds | M Metal Bonds | R Resin Bonds | El Electroplated

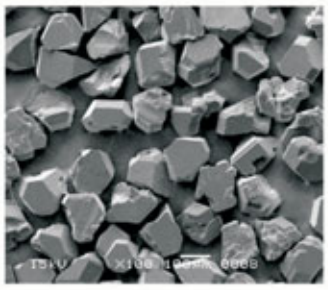
MD520

M R

The most friable and irregular shaped diamond in MD series. Ideal used in metal and resin bond systems, for low impact area application such as polishing of marble, granite and ceramic tiles, rubber cut-off wheels, grinding of CBN, gem stone.



MD520

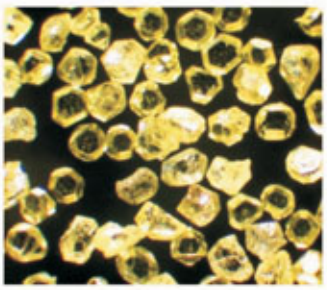


SEM

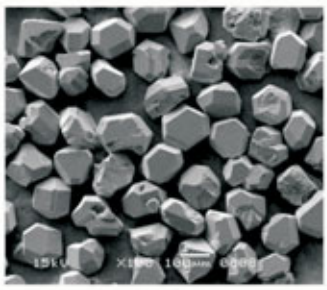
MD530

M R El

Angular, sharp diamond with high friability. Its rough surface enhance retention in bond system. Slight higher toughness than MD520, is strongly recommended for electroplated tool application to grind glass, ceramics, cast iron, etc.



MD530

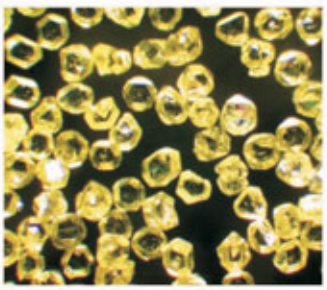


SEM

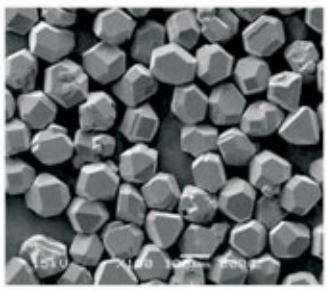
MD540

Vit M El

Blocky shape, higher crystal surface roughness than MD550, Ideal for metal bond system and electroplated tool application. According to its medium friability and sharp cutting edges, mainly used in grinding of flat glass, low demanding pencil edging, beveling of glass and mirrors.



MD540

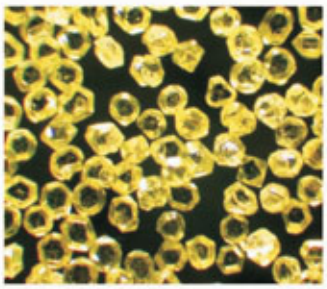


SEM

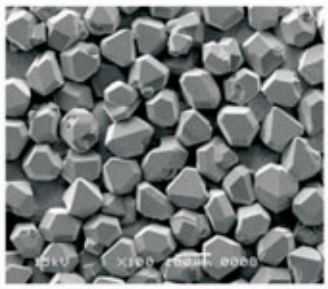
MD550

Vit M El

Blocky shape, its toughness and thermal impact is lower than MD560, but higher than MD540. The product provide an ideal balance between tool life and removal rates, is suitable for grinding in edge and beveling of flat glass, pencil edging and seaming, as well as tungsten carbide materials.



MD550

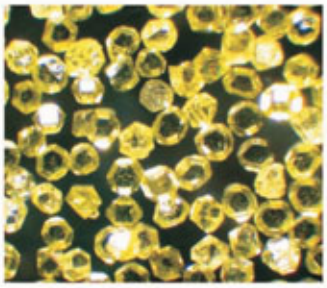


SEM

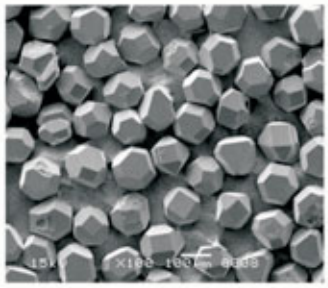
MD560

Vit M El

High impact and thermal toughness, good cubo-octahedral crystal shape with low eccentricity, wonderful transparence, highly recommended in core drilling and grooving of glass, ceramic, grinding of granite and tungsten carbide materials.



MD560

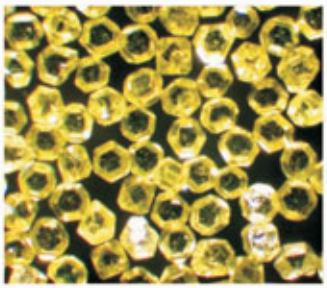


SEM

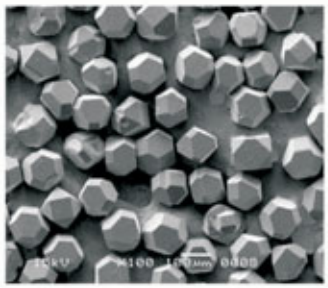
MD570

Vit M El

Defined cubo-octahedral crystal, very low internal impurities, terrific crystal transparence bring superior toughness and thermal impact ability, suited in top demanding grinding requirement, ideal for sawing and rough polishing of granite and ceramic titles, ferrite motor core and tungsten carbide grinding.



MD570

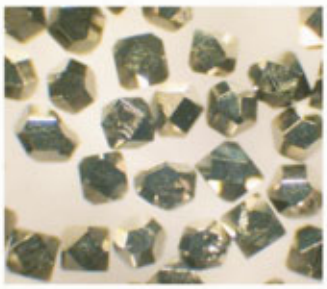


SEM

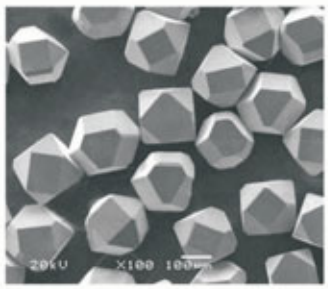
Coated Titanium SDR/MDG Diamond

Especially is used in cobalt, iron and bronze bond systems. On base of excellent chemical bonding among diamond, Titanium layer and bond system, it enhances greatly diamond retention, brings higher removal rates.

MD540 T	MD550 T
MD560 T	MD570 T
SDR 2140	SDR 2150
SDR 2160	SDR 2170



MD560 T

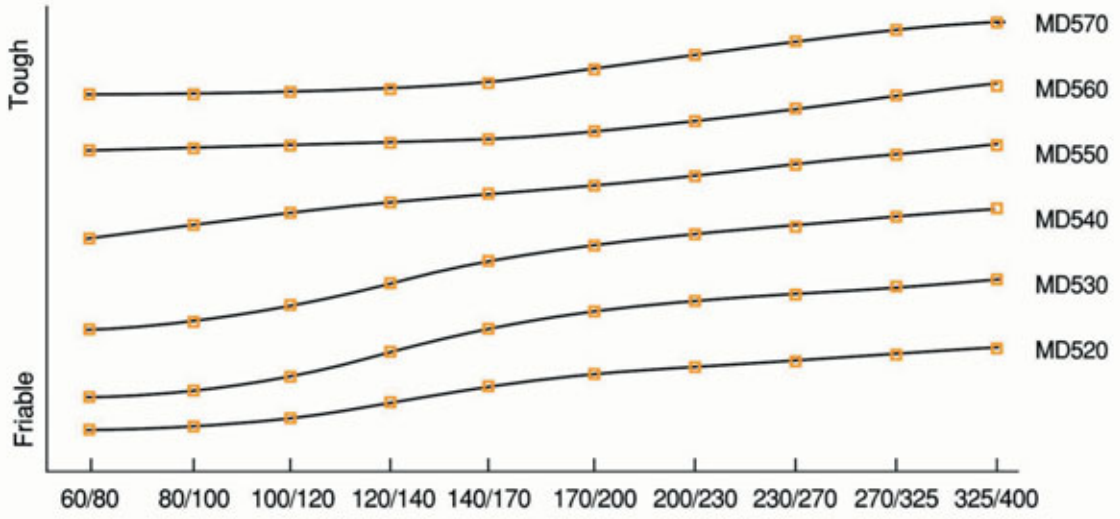


SEM

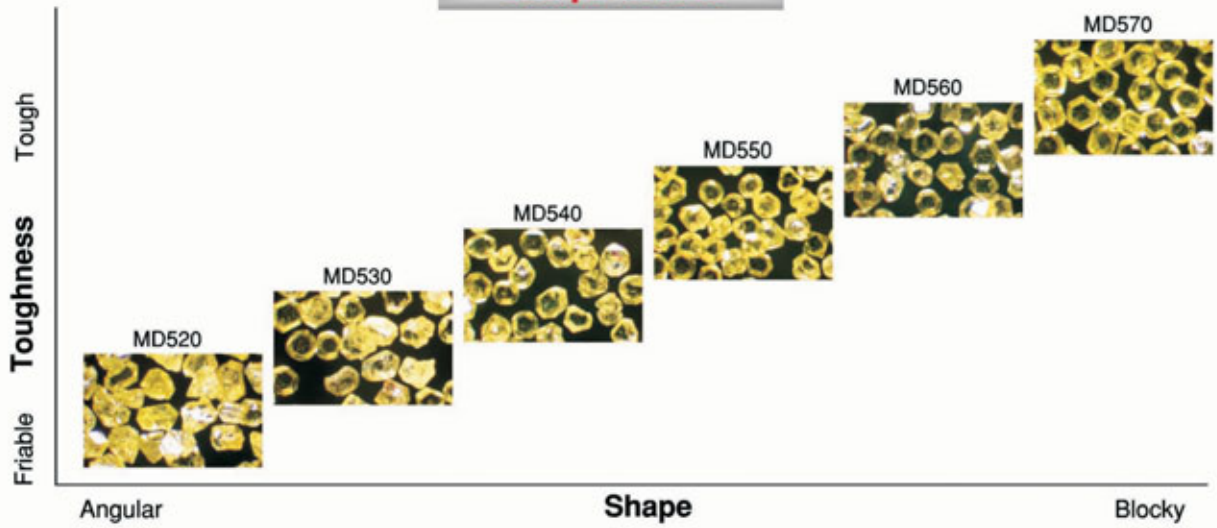
diprotex

MD METAL BOND DIAMOND

Toughness Index



Shape Index



Available Mesh Size

ANSI Mesh (FEPA)	60/80 (D252)	80/100 (D181)	100/120 (D151)	120/140 (D126)	140/170 (D107)	170/200 (D91)	200/230 (D76)	230/270 (D64)	270/325 (D54)	325/400 (D46)
MD520	●	●	●	●	●	●	●	●	●	●
MD530	●	●	●	●	●	●	●	●	●	●
MD540	●	●	●	●	●	●	●	●	●	●
MD550	●	●	●	●	●	●	●	●	●	●
MD560		●	●	●	●	●	●	●	●	●
MD570		●	●	●	●	●	●	●	●	●

diprotex