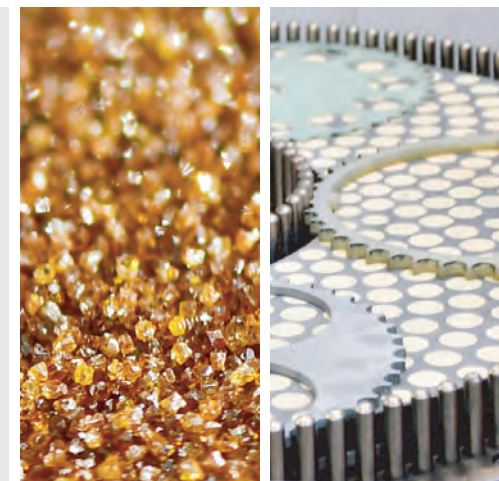




GBN-A
GBN-B
GBN-Z
GBN-T



■ Cubic Boron Nitride

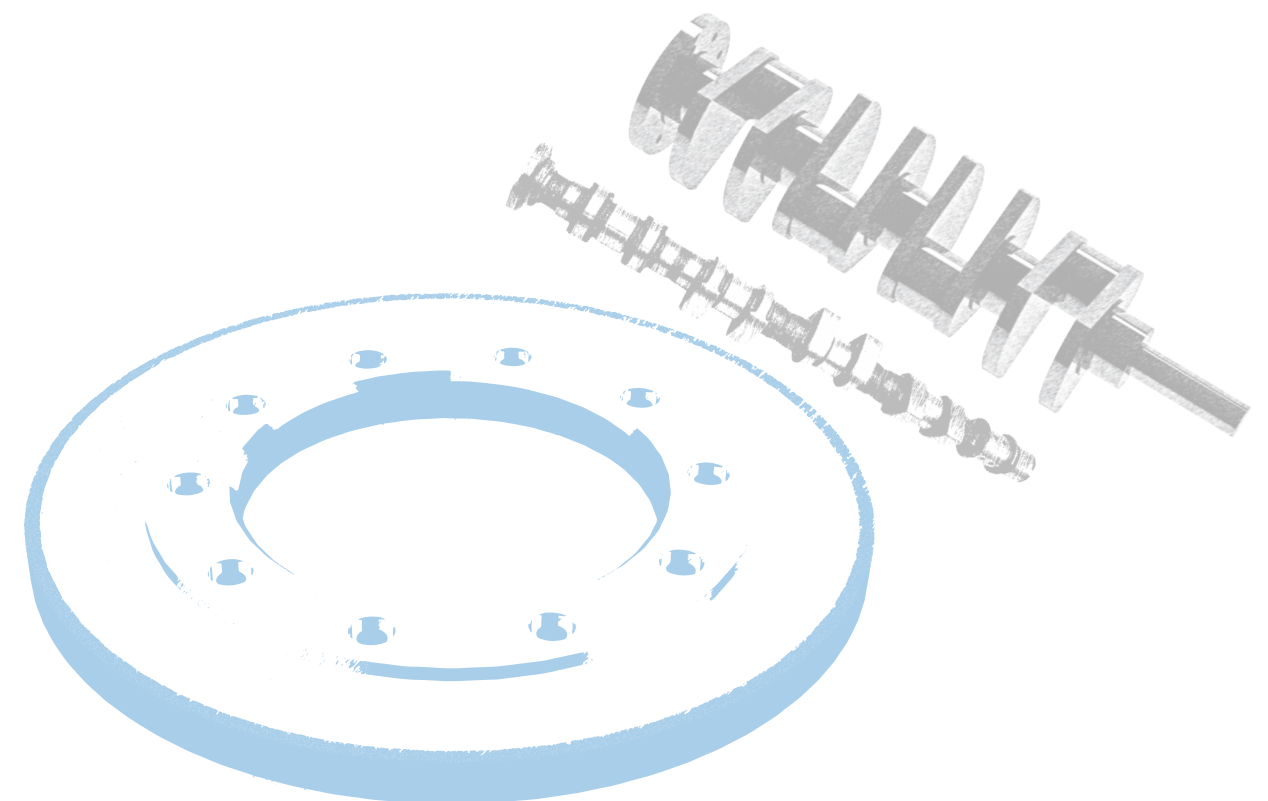
Details Make Perfect

CR GEMS SUPERABRASIVES CO., LTD.

Sales Center
Shanghai Factory
Add: No.3802,Shengang Road,Shanghai 201611,China
Tel: +86-21-6413 6696
Fax: +86-21-6413 6695
Email: crgems@crgems.cn

Shandong Factory
Add: No.45 North Weiyu Road,Liaocheng,Shandong 252000,China
Email: production@crgems.cn

Website
www.crgems.cn





CR GEMS

CR GEMS specializes in the development and manufacturing of quality superabrasives and PCD. Our main products, such as diamond grit, micro diamond powder, cubic boron nitride, PDC cutters/PCD blanks, large single crystal diamond, are widely used in the industries of construction, machinery, photovoltaic, semiconductor, optics, jewelry, aerospace, and oil & gas, etc. Customer oriented product and solution can be available.



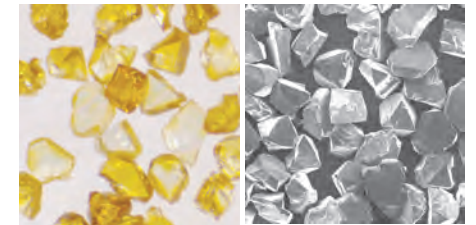
GBN Series

GBN Cubic Boron Nitride is synthesized from h-BN under HPHT. The hardness of CBN is only next to, while the thermal stability is better than diamond. CBN is difficult to react with ferrous metal, and thus could be used to process various tool steel, alloy steel, stainless steel and cast steel. It is applicable for resin bond, metal bond, electroplating, vitrified tools on the application of automobile parts and aerospace.



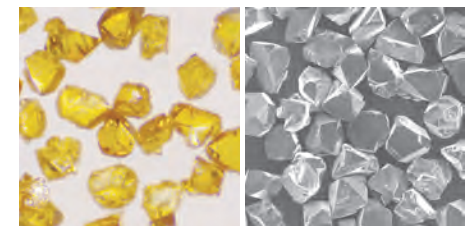
GBN-A9100

Amber mono-crystal, irregular shape of free cutting edges, good fragility. It works well with resin and vitrified bond tools.



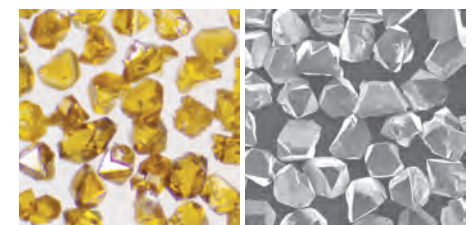
GBN-A9200

Amber mono-crystal, relatively regular shape, good transparency, and high toughness. It is recommended for vitrified bond and electroplated tools.



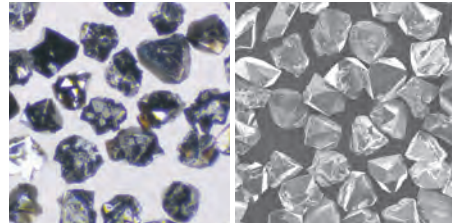
GBN-A9300

Golden mono-crystal, regular shape, good transparency, toughness, and thermal stability. It is recommended for metal bonded and electroplated tools of stringent application.



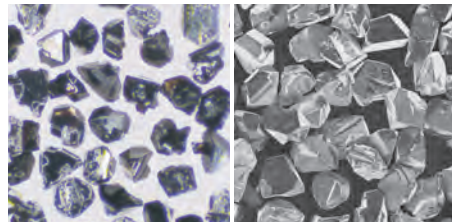
GBN-B8100

Black crystal, irregular shape, good fragility, easy to break down. These characteristics guarantee great grinding efficiency, and thus it is applicable for resin and vitrified bond tools.



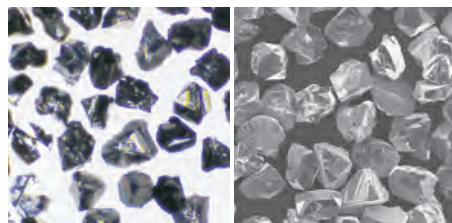
GBN-B8200

Black crystal, most in semi-blocky, medium toughness, good thermal stability. It is used for resin and vitrified bonded tools of relatively strong impact application.



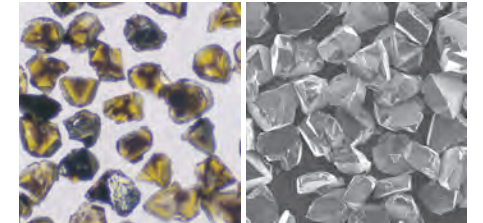
GBN-B8300

Black crystal, regular shape, most in blocky shape, high toughness, and excellent thermal stability. B8300 is primarily for metal and vitrified bond tools.



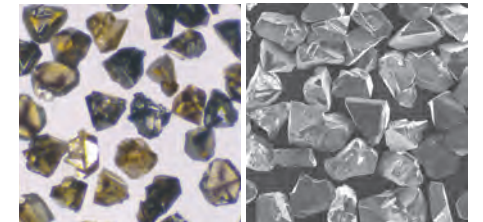
GBN-Z9600

Brown mono-crystal, irregular shape, sharp cutting edges, extended service life, good thermal stability. It is used for vitrified, resin and electroplated tools grinding cam shaft.



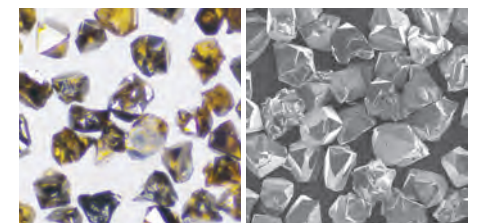
GBN-Z9700

Brown mono-crystal, relatively regular shape, good at both toughness and sharpness, great thermal stability. It is applicable for cutting and grinding of relatively strong impact. Vitrified, metal bond, and electroplated tools could use such kind of crystal.



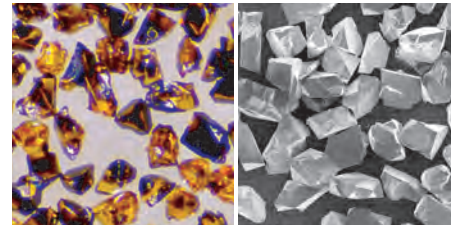
GBN-Z9800

Deep brown mono-crystal, regular shape, high toughness and thermal stability. Z9800 is recommended for strict grinding application, such as the grinding, grooving and profiling on high speed cam shaft, crankshaft since the crystal shape is endurable. Vitrified bond, metal bond and electroplated tools can be produced with Z9800.



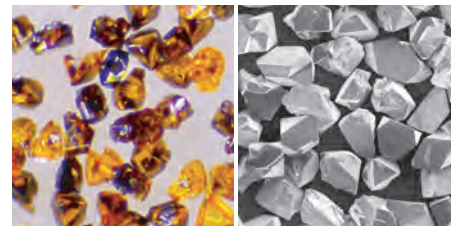
GBN-T6600

Brown crystal, triangular-plate-blocky shape, high sharpness, while with relatively good toughness. It is recommended for resin and vitrified bonded tools.



GBN-T6800

Brown crystal, triangular-3D-blocky shape, fantastic sharpness, good toughness and thermal stability. It is used for vitrified, metal bonded, and electroplated tools under strict grinding application for processing various cam shaft parts.

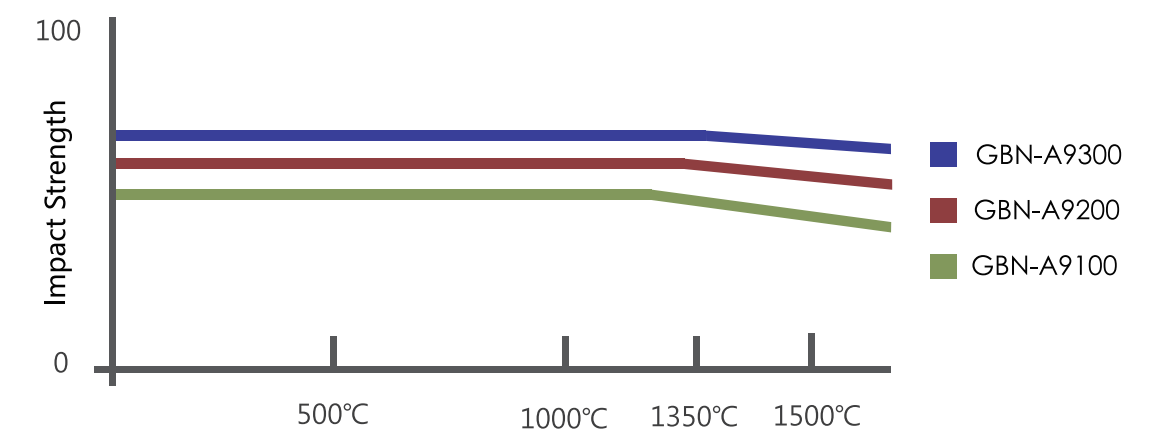
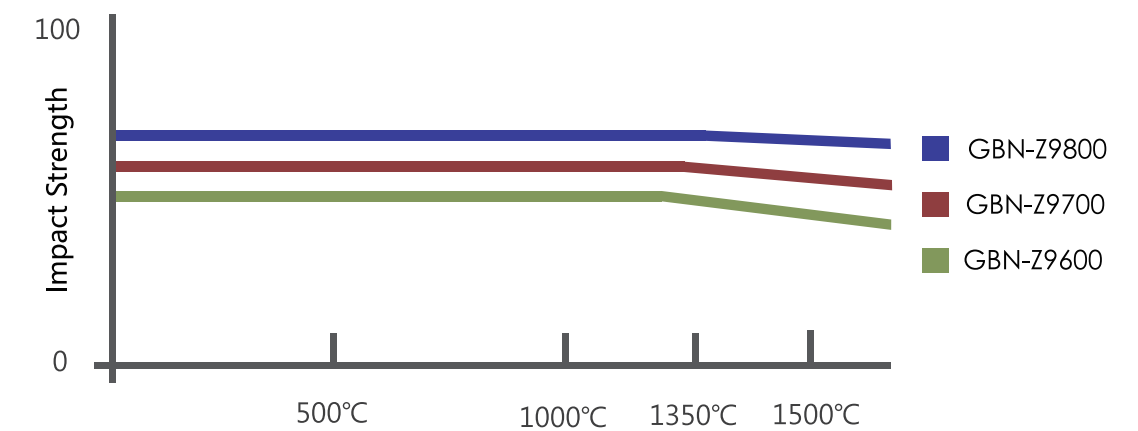


Particle Toughness and Shape

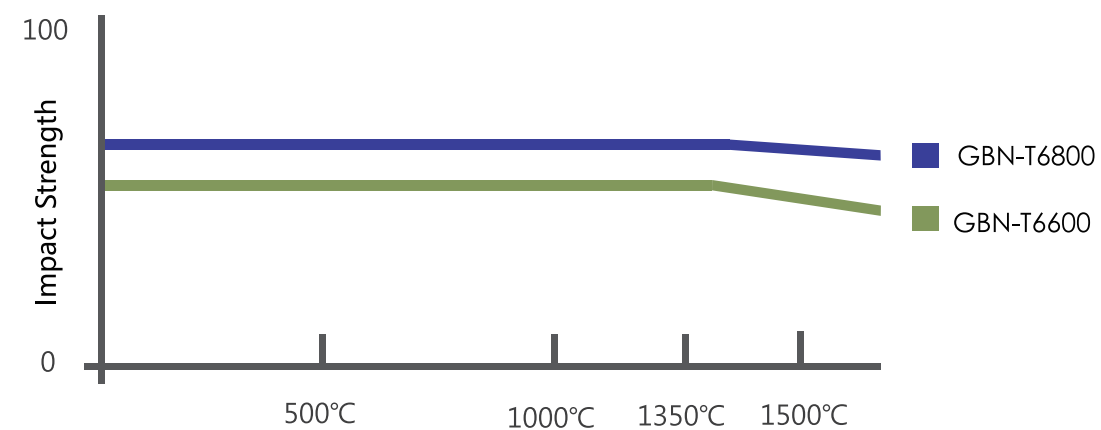
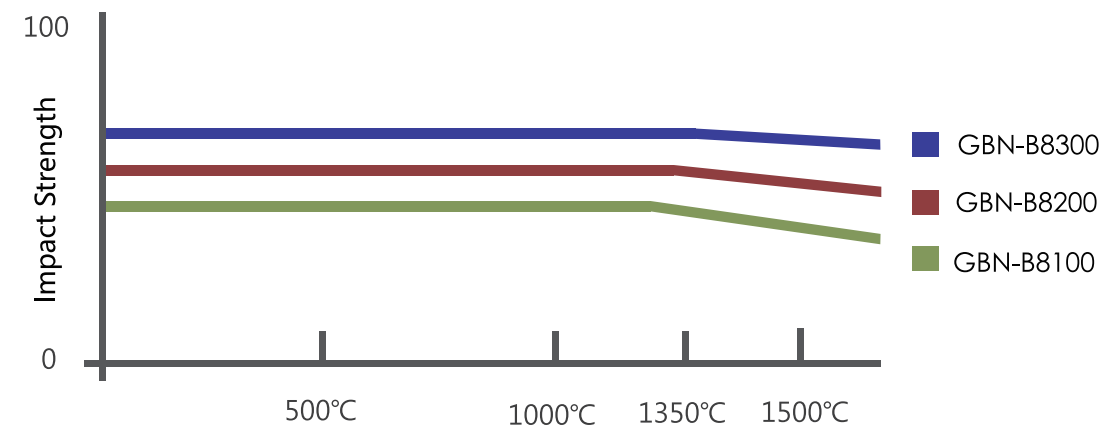


Impact Strength and Thermal Stability

By simulating the change of the strength during application, the impact strength and thermal stability are checked for GBN grit, so that the end users could choose the suitable grit as per the application. Test result as follows.



Impact Strength and Thermal Stability

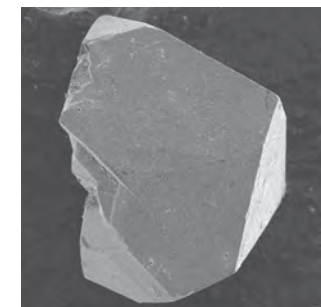


Coatings Brief

The coatings could help to improve the performance of the GBN grit in different bonds, since they are able to improve the retention between GBN grit and bond, and thus the processing quality will be better, heat damage of processed material is reduced, tools life is extended.

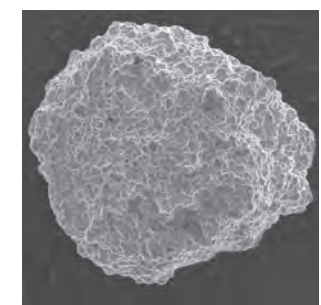
GBN-Ti

GBN-Ti is titanium coated product, and the coating greatly improves the retention between GBN grit and bond. Tool life will be extended, and Ti is applicable for metal bond tools.



GBN-NA

GBN-NA is nickel coated product. The nickel coating improves the retention between GBN grit and bond, and thus could greatly improve grinding efficiency, while extend the tool life. It is applicable for resin bond tools.



Available Grade and Size

Size Grade	50/60 (D301)	60/70 (D251)	70/80 (D213)	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)
GBN-A9100	—	—	—	*	*	*	*	*	*	*	*	*
GBN-A9200	—	—	—	*	*	*	*	*	*	*	*	*
GBN-A9300	—	—	—	*	*	*	*	*	*	*	*	*
GBN-B8100	—	—	—	*	*	*	*	*	*	*	*	*
GBN-B8200	—	—	—	*	*	*	*	*	*	*	*	*
GBN-B8300	—	—	—	*	*	*	*	*	*	*	*	*
GBN-Z9600	*	*	*	*	*	*	*	*	*	*	*	*
GBN-Z9700	*	*	*	*	*	*	*	*	*	*	*	*
GBN-Z9800	*	*	*	*	*	*	*	*	*	*	*	*
GBN-T6600	*	*	*	*	*	*	*	*	*	*	*	*
GBN-T6800	*	*	*	*	*	*	*	*	*	*	*	*

Note: “—” or the coarser and special sizes can be customized.

Recommended Application

Grade	Tools	Application
GBN-A9100 ~ GBN-A9300	metal bond wheels, brazing wheels, electroplating wheels, resin bond wheels, etc.	seals processing, machinery tools, mould fabrication, etc.
GBN-B8100 ~ GBN-B8300	resin bond and vitrified wheels, etc.	seals processing, mould fabrication, automobiles, bearing, etc.
GBN-Z9600 ~ GBN-Z9800	vitrified and metal bond wheels, electroplated wheels, high speed wheels, etc.	mould fabrication, automobiles, cooler, bearing, etc.
GBN-T6600 ~ GBN-T6800	vitrified, resin bond, metal bond and electroplated tools, etc.	machinery tools, automobile parts, aerospace, etc.

Available Coating and Coating Level

Coating Types	Description	Coating Level
Ti	Titanium	2.0% ~ 6.0%
NA	Nickel	56%, 70%

Note: The coating and coating level can be customized.

