

## Metal Bond Mesh Diamond

The MBD series encompasses M100, M200, M500, and M700. This graded series of products extends from M100, which is a relatively low-strength crystalline abrasive to MBD700.

MBD series products are widely used for drilling, grinding, and polishing applications in the optical glass, stone processing, machinery processing electronics industries, etc.

### Product features

- ◆ Symmetrical and regular crystal shape.
- ◆ Yellow color and good transparency.
- ◆ High impact toughness and thermal stability.
- ◆ Complete hexahedron or octahedron, equal-area shape.

### Customized for your particular requirement



## Applications

◆ Sapphire



◆ Industrial ceramics



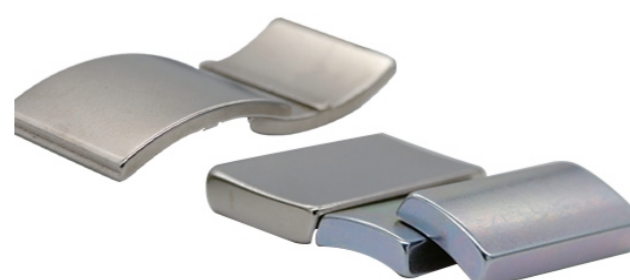
◆ Polysilicon



◆ Monocrystalline silicon

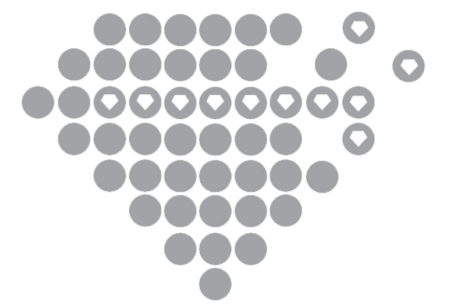


◆ Magnetic materials

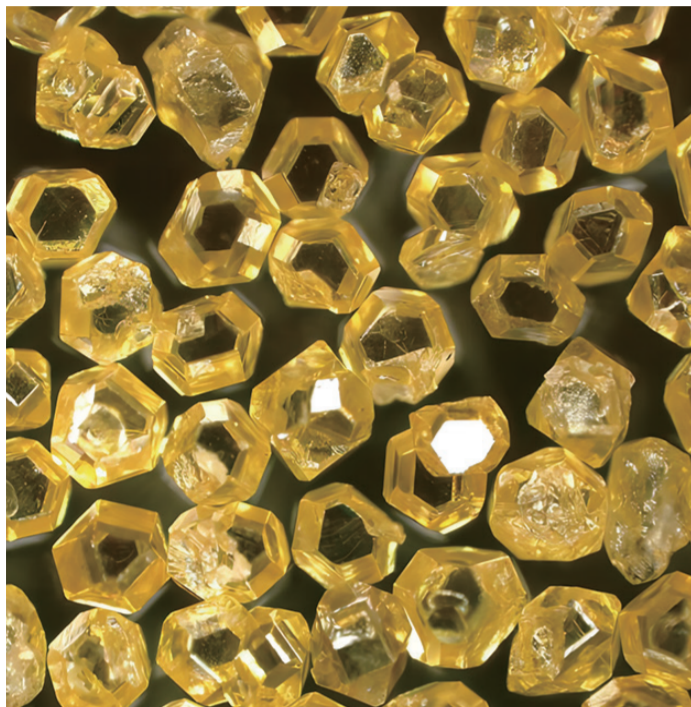


◆ Auto glass





# Metal Bond Mesh Diamond



## BRD-M100

**Characteristic:** Relatively complete shape of medium transparency. Good self-sharpening, medium impact toughness, ideal balance between tool life and surface finish requirements.

**Application:** Cut-off wheels for glass, honing cylinder, tungsten carbide, dental burrs, single crystal and polysilicon, plastic and other non-metallic brittle materials.

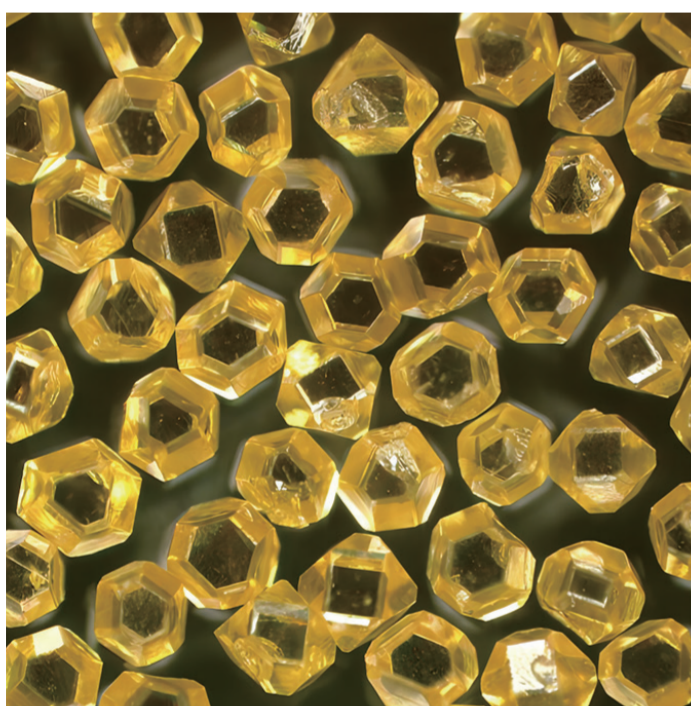
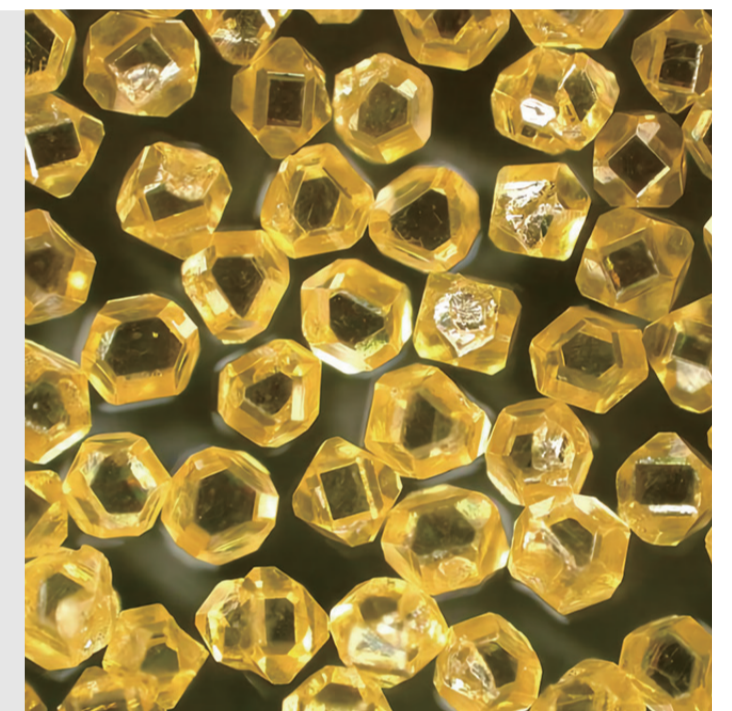
**Available size:** 60/70 - 500/600

## BRD-M200

**Characteristic:** Uniformed shape with high impact toughness and thermal resistance.

**Application:** Decorative grooving of crystal & glass PD grinding of crystal, core drilling of glass. Middle stage grinding of crystal & granite OD grinding of silicon nitride.

**Available size:** 60/70 - 500/600



## BRD-M500

**Characteristic:** Well-defined cubo-octahedral, minimized impurity, superior thermal impact.

**Application:** Suitable for processing non-metallic materials such as ruby, sapphire, optical glass, sawing of granite & ceramic tiles, grinding of ferrite motor core, electronics industry and etc.

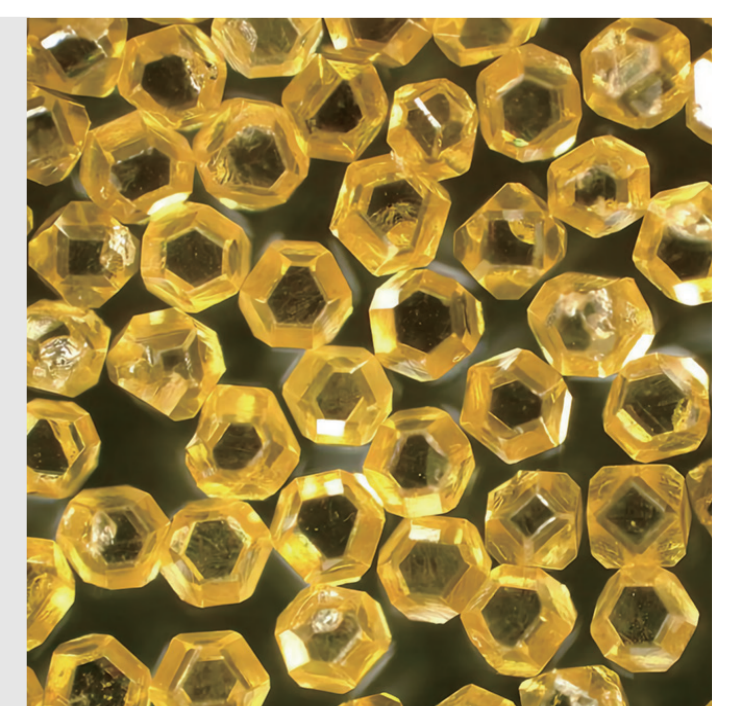
**Available size:** 60/70 - 400/500

## BRD-M700

**Characteristic:** Perfect cubo-octahedral lowest impurity and super transparency, outstanding strength and thermal stability.

**Application:** Suitable for making diamond cutting blades, saw blades, and hard materials such as hard alloy, cutting tools, composite super-hard materials cutting tools, super-hard ceramics tools, electronics industry and etc.

**Available size:** 60/70 - 230/270

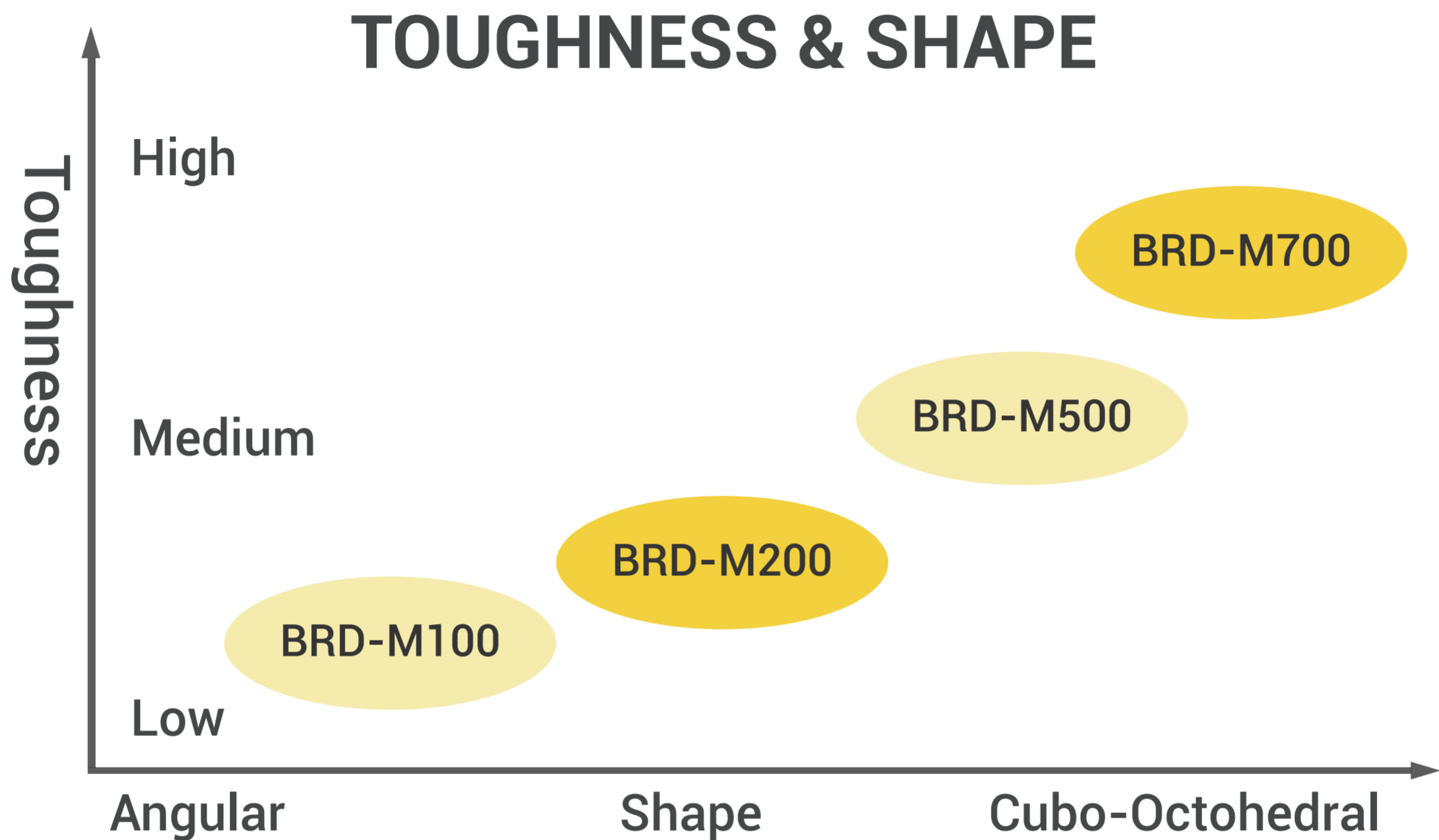


# Available Size

Grade/Size	60/70	70/80	80/100	100/120	120/140	140/170	170/200	200/230	230/270	270/325	325/400	400/500	500/600
M100	○	○	○	○	○	○	○	○	○	○	○	○	○
M200	○	○	○	○	○	○	○	○	○	○	○	○	○
M500	○	○	○	○	○	○	○	○	○	○	○	○	
M700	○	○	○	○	○	○	○	○	○				

Special requirements can be customized.

○ = Available

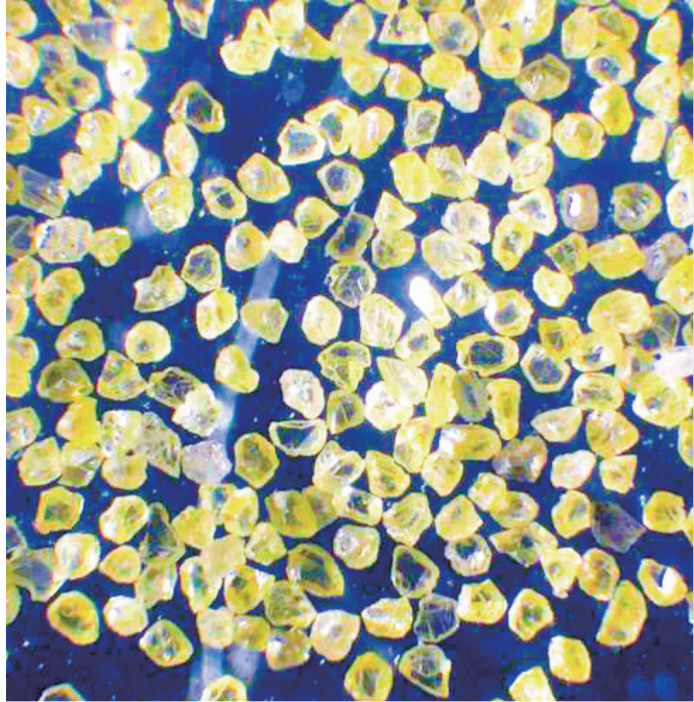


## Performance Index

Vickers hardness	8000km/mm <sup>2</sup> -10000kg/mm <sup>2</sup>
Density	3.52cm <sup>3</sup>
Young's modulus	850GPa
Thermal conductivity	1200W/mk-2000W/mk
Chemical stability	Insoluble in all acids and bases
Fracture toughness	350Mpa
Coefficient of thermal expansion	1.0+/-0.1ppm/K(300k) 4.4+/-0.1ppm/K(1000K)
Poisson's ratio	Poisson's ratio
Parallelism	Parallelism
Thickness tolerance	Thickness tolerance
Roughness of growth surface	Roughness of growth surface
Roughness of nucleation surface	Roughness of nucleation surface
The thickness of the standard	The thickness of the standard



# Mesh Diamond Powder

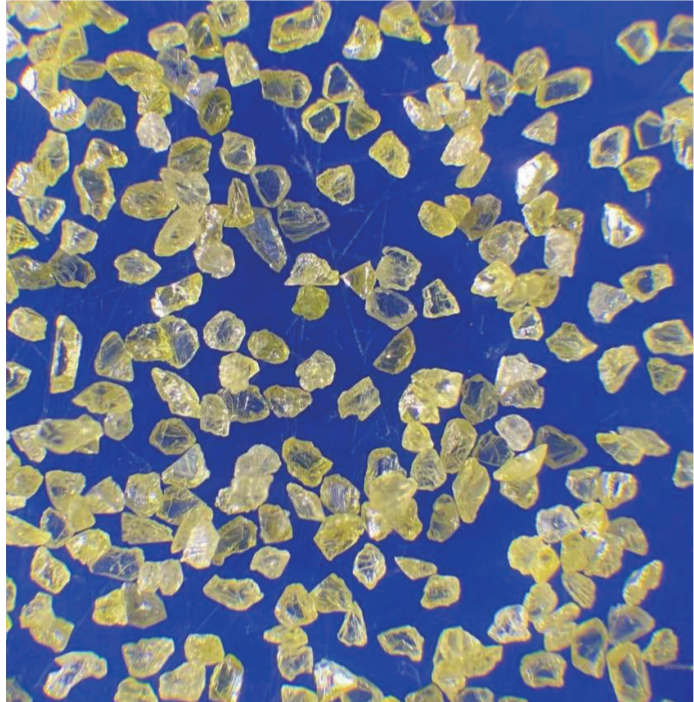


## 【BRM-Z】 Reshaped Mesh Diamond Powder

**Characteristic:** Golden color monocrystalline particle, blocky shape, very higher purity, higher toughness, longer tool life and good finishing on surface.

**Application:** Suitable for Metal, Vitrified and Electroplated bond system such as Grinding and Polishing the precision optical glass and other precision tools.

**Available size:** 50-60 to 325-400

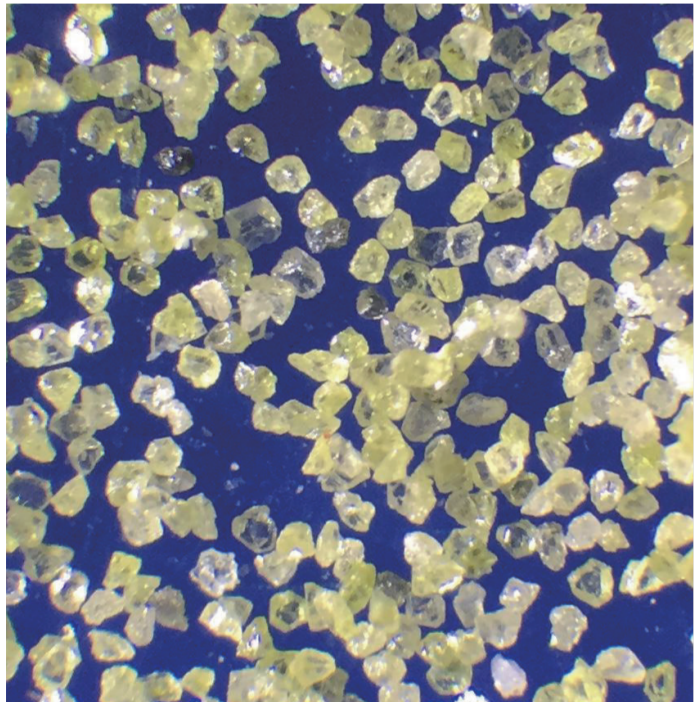


## 【BRM-P】 Crushed Mesh Diamond Powder

**Characteristic:** Yellow color monocrystalline particle, higher toughness than BRM-E, more durable, irregular crystal, higher grinding efficiency.

**Application:** Suitable for resin bond, vitrified bond, metal bond and electroplated system.

**Available size:** 50-60 to 400-500



## 【BRM-E】 Green Crushed Mesh Diamond

**Characteristic:** Yellow-green color monocrystalline particle, irregular crystal, lower toughness, new cutting edges always occur during grinding operation, high removal rate.

**Application:** Suitable for resin bond and vitrified bond system, used for grinding, polishing relatively soft materials like ceramic, glass, stone, gem, concrete, jewellery, etc.

**Available size:** 50-60 to 700-800

## Available Size

Grade/Size	50/60	60/70	70/80	80/100	100/120	120/140	140/170	170/200	200/230	230/270	270/325	325/400	400/500
FEPA	D301	D251	D213	D181	D151	D126	D107	D91	D76	D64	D54	D46	D32
BRM-Z	○	○	○	○	○	○	○	○	○	○	○	○	○
BRM-P	○	○	○	○	○	○	○	○	○	○	○	○	○
BRM-E	○	○	○	○	○	○	○	○	○	○	○	○	○

Special requirements can be customized.

○ = Available