

单晶金刚石微粉

Micron Diamond Powder

产品特征：按照传统应用领域的通用标准进行生产，确保了客户最关注的各项指标能够满足要求：粒度分布和纯度符合行业标准，颗粒形状良好，去除超尺寸颗粒，在传统应用领域是 FDP 产品的经济替代品。

For the monocrystalline diamond micropowder, the high-quality artificial diamond is taken as the raw material, and their production process and product standard are formulated according to the requirement of different industries and application fields respectively and actually executed.

产品描述:单晶金刚石微粉选用优质人造金刚石作为原料，根据不同行业及应用领域的要求分别制定并实际执行各自的生产工艺和产品标准

Product description:For the monocrystalline diamond micropowder, the high-quality artificial diamond is taken as the raw material, and their production process and product standard are formulated according to the requirement of different industries and application fields respectively and actually executed.

●EDP 系列

产品特征：

适合要求快速加工的应用领域，较低强度的原材料确保产品具有良好的自锐性，满足客户对加工效率的要求，同时对原料和加工成本的严格控制使产品在达到使用要求的前提下保持了较高的价格竞争力

应用领域：

石材加工工具、陶瓷加工工具、树脂结合剂磨块、树脂结合剂砂轮等。

●EDP series

Product characteristics:

It is suitable for the application field having requirement for rapid processing, and relatively low-intensity raw materials, so as to ensure that the product has good self-sharpening and meets the customer requirement to processing efficiency, and meanwhile, the product keeps the higher price competitiveness due to the strict control of raw material and processing cost on the premise of meeting the usage requirement.

Application field:

Stone processing tools, ceramic processing tools, resin bonded abrasion block, resin bonded grinding wheel, etc.

●CDP 系列

产品特征:

按照传统应用领域的通用标准进行生产, 确保了客户最关注的各项指标能够满足要求: 粒度分布和纯度符合行业标准, 颗粒形状良好, 去除超尺寸颗粒, 在传统应用领域是 FDP 产品的经济替代品。

应用领域:

传统的锯切、切削、磨削、研磨、抛光和金刚石制品等。

●CDP series

Product characteristics:

The product is produced in accordance with the general standard of traditional application field, so as to ensure that the various indexes that the customer pays the most attention to can meet the requirement: the particle size distribution and purity conform to the industrial standard, the particle shape is good, and the oversize particles are removed, therefore, it is the economic substitute of FDP product in the traditional application field.

Application field:

Traditional saw cutting, cutting, grinding, polishing, diamond products, etc.

●FDP 系列

产品特征:

在 CDP 系列的长寿命型产品的基础上, 运用多种方法进行后处理加工, 确保产品每个颗粒晶形规整, 无条、片状不规则形, 更彻底地去除超尺寸颗粒, 表面纯度达到 ppm 级, 分散性能良好。

应用领域:

传统的锯切、切削、磨削、研磨、抛光, 以及特定范围的高精度切、磨、抛, 可用作各类金刚石工具及金刚石研磨膏和研磨液的原料。

●FDP series

Product characteristics:

Based on the CDP long-life products, this product is subjected to the post-treatment processing with many methods to ensure that each particle has regular crystalline form and has no strips

and flakiness particles., thereby removing the oversize particle more thoroughly; and moreover, the purity of surface reaches Level ppm, and the dispersion performance is good.

Application field:

Traditionally saw cutting, cutting, grinding, polishing, and the high-precision cutting, grinding and polishing with a specific range. Moreover, it can be used as raw material of various diamond tool tool, diamond paste and diamond slurry.

●HDP 系列

产品特点:

采用高品级、高强度金刚石原料，继承了原材料本身诸多优点，颗粒内部杂质极低，低磁性、耐磨及耐冲击性高，配合成熟的 FDP 工艺和标准进行生产，使效率和长寿命等指标得到了完美的结合。

应用领域:

金刚石复合片、金刚石聚晶及金属结合剂制品、陶瓷结合剂制品、电镀金刚石制品等。

●HDP series

Product characteristics:

With adoption of high-grade and high-strength diamond raw material, it inherits many advantages of raw materials. The particles have very low internal impurities, low magnetism, high wear resistance and impact resistance. By cooperating with the mature FPD process and standard production, the indexes, such as high efficiency and long life, are perfectly combined.

Application field:

High - end PDC, TSP, metal bond products, vitrified bond products and electroplated diamond products, etc.

●SFDP 系列

产品特点:

针对某些特定使用领域，在常规产品的基础上进行深加工以更好地满足这些特定行业的专门要求。

●SFDP series

Product characteristics:

With regard to some specific usage fields, deep processing is carried out based on the conventional products to meet the specific requirement of these special industries better.

●金刚石复合片专用型 SFDP-1

利用专有的后处理工艺对 FDP 和 HDP 系列产品进行高纯处理，确保了产品表面金属及非金属杂质元素含量极低，合理的颗粒级配使颗粒振实密度提高，在复合片合成时更容易稳定结合生长。

适用于制作金刚石聚晶、高端金刚石复合片、金属结合剂和陶瓷结合剂磨具、聚晶拉丝模等产品。

●Diamond powder special for PDC

FDP and HDP series products are subjected to the high-purity treatment with the special post-treatment process, so as to ensure that the metallic and nonmetallic impurity elements on the product surface have very low content, the tap density of particles is improved by virtue of reasonable grain composition, thus, the product is stabilized more easily and grown in a combined manner when synthesizing the compact.

It is applicable to TSP, high-end PDC, metal bond and vitrified bond grinding tools, polycrystalline drawing die, etc.

●电镀金刚石工具专用型 SFDP-2

严格控制的分级生产过程使产品粒度分布特别集中，更好地去除无效的细颗粒以及容易造成划伤的粗颗粒，有效磨粒比例大幅度增加，提高工件加工效率，降低不良率。

适用于各种高精度电镀金刚石砂轮、磨盘、刀具、电镀金刚石线、超薄锯片等。

●Diamond powder special for electroplated diamond tool SFDP-2

The particle size distribution of product is especially concentrated due to the strictly controlled classification production process, thereby removing the noneffective fine particles and coarse particles causing the scratch easily better, substantially increasing the effective grain proportion, improving the processing efficiency of workpiece, and reducing the reject ratio.

It is applicable to the various high-precision electroplated diamond grinding wheels, abrasive disk, cutter, electroplated diamond wire, ultrathin saw blade, etc.

●精密抛光专用型 SFDP-3

专门针对高端抛光领域开发的细粒度产品，传统的微粉整形和分级工艺对 1 微米以细的颗粒无法实现有效整形和分级，常规产品内存在大量的不规则和超尺寸颗粒，这是直接导致超细金刚石微粉抛光效率高但抛光效果不佳的核心因素，由于突破了细粒度金刚石整形和分

级的技术障碍，可以有效的对低至 50 纳米的金刚石颗粒进行整形和分级处理，确保产品颗粒集中，完全去除不规则及超尺寸颗粒，确保了抛光过程中不会引起意外的深度划伤。

适用于高端精密宝石、镜头、金相耗材、液晶面板、液晶玻璃、蓝宝石、石英片、LED 蓝宝石基板、液晶玻璃、陶瓷材料等精密研磨和抛光。

●Diamond powder special for fine polishing SFDP-3

It is specially aimed at the fine-grained products in the high-end polishing field, the effective shaping and grading cannot be carried out on 1μ m fine particles through traditional process, and a lot of irregular and oversize particles exist in the conventional product, which is the core factor directly causing the high polishing efficiency but bad polishing effect. Due to breaking through the technical obstacle of shaping and grading of fine size diamond powder, we can shape and grade the 50nm diamond particles effectively, which ensures the narrow distribution of products. Completely-removed oversize particles can ensure it won't cause deep scratch during the polishing process.

It is applicable to the precision grinding and polishing of high-end n gems, lens, metallographic consumables, LCD panel, liquid crystal glass, sapphire, quartz plate, LED sapphire substrate and ceramic materials..

●硬脆材料加工专用型 SFDP-4

针对硬脆材料的特点及加工要求，专门的整形工艺对颗粒进行圆角化、粗糙化处理，确保每个颗粒浑圆规整，没有突出的棱角，颗粒粗糙的表面显著增强与工件的把持力，浑圆的形状可以有效的避免硬脆材料在加工中的崩边和划伤等不良。

适用于加工硬脆材料专用的电镀金刚石刀具、砂轮等。

●Diamond powder special for hard and brittle material SFDP-4

Based on the characteristics and processing requirement of hard and brittle material, the round corner and roughening treatment are carried out on the particles with the special shaping process, so as to ensure that each particle is perfectly round and free of edges and corners. The rough surface of particles obviously enhance the holding force between diamond and workpiece. The blocky shape can avoid the edge breakage and scratching of hard and brittle material during processing.

It is applicable to process the electroplated diamond cutters and grinding wheels which are special for hard and brittle material.

可供规格：

规格	中值（μm）	CDP	FDP	HDP	SFDP-1	SFDP-2	SFDP-3	SFDP-4
0-0.05	0.05		√	√	√		√	
0-0.08	0.08		√	√	√		√	
0-0.1	0.1		√	√	√		√	
0-0.25	0.2		√	√	√		√	
0-0.5	0.3		√	√	√		√	
0-1	0.5	√	√	√	√		√	
0.5-1.5	0.8	√	√	√	√		√	
0-2	1	√	√	√	√		√	
1-2	1.4	√	√	√	√	√		
1-3	1.8	√	√	√	√	√		
2-4	2.5	√	√	√	√	√		
3-6	3.5	√	√	√	√	√		
4-8	5	√	√	√	√	√		
5-10	6.5	√	√	√	√	√		
6-12	8.5	√	√	√	√	√		
8-12	10	√	√	√	√	√		√

8-16	12	√	√	√	√	√		√
10-20	15	√	√	√	√	√		√
15-25	18	√	√	√	√	√		√
20-30	22	√	√	√	√	√		√
20-40	26	√	√	√	√	√		√
30-40	30	√	√	√	√	√		√
40-60	40	√	√	√	√	√		√
50-70	50	√	√	√	√	√		√
60-80	60	√	√	√	√	√		√

注：表中为常规粒度，可根据客户要求提供其它粒度产品。

Available Specifications:

specification	Median (μm)	CDP	FDP	HDP	SFDP-1	SFDP-2	SFDP-3	SFDP-4
0-0.05	0.05		✓	✓	✓		✓	
0-0.08	0.08		✓	✓	✓		✓	
0-0.1	0.1		✓	✓	✓		✓	
0-0.25	0.2		✓	✓	✓		✓	
0-0.5	0.3		✓	✓	✓		✓	
0-1	0.5	✓	✓	✓	✓		✓	
0.5-1.5	0.8	✓	✓	✓	✓		✓	
0-2	1.0	✓	✓	✓	✓		✓	
1-2	1.4	✓	✓	✓	✓	✓		
1-3	1.8	✓	✓	✓	✓	✓		
2-4	2.5	✓	✓	✓	✓	✓		
3-6	3.5	✓	✓	✓	✓	✓		
4-8	5.0	✓	✓	✓	✓	✓		
5-10	6.5	✓	✓	✓	✓	✓		
6-12	8.5	✓	✓	✓	✓	✓		
8-12	10	✓	✓	✓	✓	✓		✓

8-16	12	√	√	√	√	√		√
10-20	15	√	√	√	√	√		√
15-25	18	√	√	√	√	√		√
20-30	22	√	√	√	√	√		√
20-40	26	√	√	√	√	√		√
30-40	30	√	√	√	√	√		√
40-60	40	√	√	√	√	√		√
50-70	50	√	√	√	√	√		√
60-80	60	√	√	√	√	√		√

Note: those in the table are the conventional particle size, and the products with other particle sizes can be provided according to the customer requirements.