

多晶金刚石

Polycrystalline diamond

产品特征：颗粒晶形浑圆，无条、片状不规则形,完全去除超尺寸颗粒,粒度分布集中,表面纯度达到 ppm 级,分散性能良好。

Our polycrystalline diamond is produced by detonation with high energy explosive, the high explosive heat and high detonating pressure change the graphite into poly diamond, and its structure is similar to natural carbonado diamond. Because synthesis time is very short, there are some lattice defects inside the crystal, almost all the diamond particle is composed by integrating the micro crystallites size of less than 20nm together through sharing the crystal face. In processing special material, poly diamond will not scratch the workpiece's surface, because its compressive strength and impact strength are far below common diamond products. Under certain pressure, microcrystal grain of poly diamond particle surface will continuously peel off and form new cutting edge. These characteristics provide solutions for grinding and polishing some high hardness special materials rapidly. Experiments show that the removal rate of poly diamond is 2~ 4 times higher than common diamond and without scratches. Based on years of mature experience of monocrystalline diamond powder, we have successfully resolved the technical processing issues of polycrystalline diamond, such as crushing, reshaping, purifying, grading etc.. We supply bulk polycrystalline diamond powder consistent with the standard requirements of the FDP series of monocrystalline diamond powder.

产品描述：多晶金刚石是利用高能炸药在爆炸瞬间产生的极高爆热和爆压对石墨做功，使石墨转变成类似天然 carbonado 结构的金刚石，由于合成时间极短，金刚石晶粒中存在结构缺陷，几乎全部是由基本晶粒小于 100 纳米的微晶通过共用晶面组成的金刚石颗粒，在一些特殊材料的加工过程中，由于多晶金刚石的特性不会对工件产生深度划伤，同时在受到一定压力后会促使金刚石表面的微晶晶粒连续剥落从而不断形成新的切削刃，这样的特点为一些高硬度特种材料的快速磨、抛加工提供了可能。实验表明：多晶金刚石在一些高硬度特种材料上的去除率是普通金刚石产品的 2-4 倍，且不会产生划伤。

基于多年来对单晶金刚石微粉的成熟生产经验，我们成功地解决了多晶金刚石产品的破碎、整形、提纯、分级等工艺问题，批量提供的多晶金刚石微粉产品符合单晶金刚石微粉

FDP 系列的标准要求。

Product description

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- ★ 粒度分布集中
- ★ 表面纯度达到 ppm 级
- ★ 分散性能良好

可供规格:

规格	0-1	1-2	1-3	2-4	2-5	3-6	3-7	4-8	5-10	6-12	8-12
	√	√	√	√	√	√	√	√	√	√	√

应用领域:

- ★ SiC、Al₂O₃ 等半导体晶片的减薄、抛光

★ 多种陶瓷材料的表面抛光

★ 不锈钢、铝合金等金属材料的表面抛光

Product characteristics:

- ★ Round particle shape, no irregular shapes like pencils or flakes.
- ★ Oversizes completely removed.
- ★ Narrow PSD.
- ★ Surface purity can reach ppm level.
- ★ Outstanding dispersibility.

Available sizes

Available sizes	0-1	1-2	1-3	2-4	2-5	3-6	3-7	4-8	5-10	6-12	8-12
	√	√	√	√	√	√	√	√	√	√	√

Remarks: Special requirements can be tailor-made.

Application field:

Lapping and polishing of semiconductor wafers such as SiC and sapphire wafers.

Surface polishing of various ceramics.

Surface treatment of metals such as stainless steel and aluminium alloy.