MSY micron diamond powder
Monocrystalline diamond, precision size range

MSY micron diamond powder is a superior quality, monocrystalline metal-bond type diamond. The narrowly graded precision sizes of MSY diamond achieve a 10 % higher Performance Index compared to standard monocrystalline diamond powders. MSY diamond is available as diamond powder, as ready-to-use diamond slurry and as Liquid Diamond.

**Particle strength** Monocrystalline diamond particles fracture along the parallel cleavage planes running through the particle. For diamond tools, particle fracturing provides a self-sharpening mechanism and thus increases tool life.

**Blocky particle shape** A specific shaping process ensures a uniform and blocky particle shape. Controlling the particle shape is a vital factor for high material removal rates and for uniform, scratch-free surface finishes.

**Precision size range** A narrow particle size distribution maximizes the amount of particles of the same size while fine and coarse particles are minimized. Combined with a clearly defined upper size limit, this feature allows for both high process reproducibility and superior results in surface quality.

**Narrow tolerance** The narrow tolerances in particle size distribution guarantee consistent lot-to-lot performance in the application.

**Purity** Proprietary cleaning processes guarantee superior standards of product purity.
Synthesis  MSY diamond is a monocrystalline metal-bond diamond powder produced by HPHT (high-pressure, high-temperature) synthesis. The diamond particles feature an oriented crystal structure with parallel-running cleavage planes, similar to natural diamond. Depending on diamond size, MSY diamond varies in appearance from light gray to pale yellow.

Applications  Monocrystalline synthetic diamond powder is relatively inexpensive to produce and is therefore a popular choice for grinding, lapping and polishing purposes. Typical applications for MSY diamond powder include lapping and polishing of ceramics, metals, diamond wire dies, PCDs and gemstones. Examples of bonded applications include manufacturing of metal-bond grinding tools, diamond pellets, wear-resistant surfaces and PCD sintering.

Sub-micron sizes also available as Liquid Diamond.