



## DIAMOND SUSPENSIONS

PSI Diamond Suspensions are water based diamond products developed for the Materials Laboratory. Unlike traditional diamond slurries, which were a simple mixture of diamond particles and liquid, the diamond particles in PSI Diamond Suspension will not settle out. The diamond particles are held in permanent suspension by a binding agent. This means no vigorous shaking is required during use. The permanently suspended diamond particles insure the same diamond concentration from the beginning of the bottle to the last drop.



PSI offers two types of man-made diamond particles in permanent suspension: monocrystalline and polycrystalline. The monocrystalline product is most frequently found in diamond compounds and traditional slurries. The polycrystalline product has not been commonly available in the past.

The monocrystalline diamond is a product of high pressure, high temperature technology. The diamond particles are single crystal structures, very blocky and strong. This excellent shape and high particle strength results in an extremely closely graded powder. These color coded suspensions are recommended for polishing on metallic and many non-metallic materials.

The polycrystalline diamond is a shock synthesized product, producing a strong, multi-edged particle. The resulting particles are very strong, such that cleavage fractures will not occur. The polycrystalline diamond particles are black in color, resulting in shades of gray coloring of the suspension. This product is less frequently used, and is recommended for polishing non-metallic oxides and electronic components.

PSI Diamond Suspensions are well suited for use with either semi-automated polishing systems or with manual polishing. The liquid vehicle which carries the diamond particles is carefully formulated to prevent clogging in either spray applicators or in semi-automatic dosing systems. For semi-automatic systems use, both the monocrystalline and polycrystalline diamond suspension are available in a 16oz (453g) plastic container. This economical size container allows easy transfer to the semi-automatic dosing system containers.

The monocrystalline diamond suspension is also available in a hand pressurized pump spray. This pump sprayer dispenses the diamond suspension like an aerosol, but with no harmful chemicals or propellants. This easy to use container provides a stream, heavy or light dose of the suspension product. In the light dose, a very fine mist can be directed to cover the full surface of the polishing cloth.

COLOR/GRADE CHART			
Micron	Particle Range	Mono-Color	Poly-Color
45 $\mu$	30-50 $\mu$	Purple	Black
30 $\mu$	20-40 $\mu$	Mahogany	Black
15 $\mu$	12-22 $\mu$	Brown	Black
9 $\mu$	8-12 $\mu$	Red	Black
6 $\mu$	4-8 $\mu$	Yellow	Black
3 $\mu$	2-4 $\mu$	Green	Black
1 $\mu$	0-2 $\mu$	Blue	Black
.5 $\mu$	0-1 $\mu$	Turquoise	Black
.25 $\mu$	0-.5 $\mu$	Gray	Black
.1 $\mu$	0-.25 $\mu$	Charcoal	Black

PSI maintains a wide inventory of Diamond Suspensions in 8oz pump spray, 16oz flip top bottles, 64oz bottles, and 1gal bottles.

Feel free to contact us for large quantity availability and pricing.