

Colloidal Suspensions

Used for final polishing, colloidal suspensions are mixtures of abrasive particles dispersed throughout a chemically aggressive liquid carrier. This combination provides a chemical-mechanical polishing action, resulting in deformation-free surfaces.

0.05 & 0.02 µm Non-Crystallizing Silica

Allied offers two non-crystallizing silica suspensions, both with 9.8 pH. The 0.05 micron formula is an excellent final polish for a wide variety of materials, especially non-ferrous metals, PCBs and ICs. The 0.02 micron formula provides ultrafine surface finishes for demanding SEM/TEM analysis.



0.05 µm	Description	0.02 µm
180-20015	16 oz. (480 mL)	180-40015
180-20010	32 oz. (950 mL)	180-40010
180-20000	128 oz. (3.8 L)	180-40000

0.04 µm Non-Stick/Rinsable Silica

An excellent final polishing suspension for most materials, this proprietary formula features a pH of 10 and rinses easily from samples and equipment, even after it dries. It is slow drying, making it an ideal choice for prolonged polishing requirements such as those for EBSD. The pH may be modified with chemical solutions to improve microstructural contrast.



Item	Description
180-25015	16 oz. (480 mL)
180-25010	32 oz. (950 mL)
180-25000	128 oz. (3.8 L)

0.05 µm Silica/Alumina

A unique mixture of colloidal silica and alumina with a pH of 8.5. The addition of gamma alumina allows improved mechanical polishing when compared to colloidal silica. Used to final polish both ferrous and non-ferrous metals, metal-matrix composites and various non-metallic materials.



Item	Description
180-70015	16 oz. (480 mL)
180-70010	32 oz. (950 mL)
180-70000	128 oz. (3.8 L)

0.05 & 0.03 µm Alumina

An acidic alumina suspension with a pH of 3.5 used to final polish ferrous metals and ceramics. This non-clogging formula flows easily through fluid dispensing systems, and can be diluted with DI water up to 3:1.



0.05 µm	Description	0.03 µm
180-30015	16 oz. (480 mL)	180-80015
180-30010	32 oz. (950 mL)	180-80010
180-30000	128 oz. (3.8 mL)	180-80000



Alumina Powder

Allied's alumina powders are made to the tightest quality specifications and are used for final polishing of metallographic specimens. Accurately controlled purity levels and particle size distribution assure optimum polishing results. Mix with DI water to produce a liquid slurry. 0.05 µm particle type/shape is Gamma, 0.3 and 1.0 µm are Alpha.

De-agglomerated alumina powder is specially treated to reduce the number of agglomerates (groups of particles in each grade of manufactured alumina).

Standard	Description	De-agglo.
90-187015	0.05 µm, 1 lb. (450 g)	90-187050
90-187020	0.05 µm, 5 lb. (2.3 kg)	90-187055
90-187085	0.3 µm, 1 lb. (450 g)	90-187120
90-187090	0.3 µm, 5 lb. (2.3 kg)	90-187125
90-187155	1 µm, 1 lb. (450 g)	90-187190
90-187160	1 µm, 5 lb. (2.3 kg)	90-187195

OpTech™ Polishing Slurry

OpTech 0.5 and 3 µm are slurries composed of ceria/alumina and silica/alumina/diamond abrasives, respectively. They provide an excellent finish on materials such as glass, fiber optics, quartz, sapphire and ceramics.

Item	Description
90-188000	0.5 µm, 16 oz. (480 mL)
90-188020	3 µm, 16 oz. (480 mL)



Alumina Suspension

Alumina suspensions are de-agglomerated and water based. Chemically stable, the pre-mixed formulas are a clean, convenient alternative to powders and are ideal for the finest finishes.

Item	Description
90-187505	0.05 µm, 6 oz. (180 mL)
90-187540	0.05 µm, 32 oz. (950 mL)
90-187575	0.05 µm, 128 oz. (3.8 L)
90-187510	0.3 µm, 6 oz. (180 mL)
90-187545	0.3 µm, 32 oz. (950 mL)
90-187580	0.3 µm, 128 oz. (3.8 L)
90-187515	1 µm, 6 oz. (180 mL)
90-187550	1 µm, 32 oz. (950 mL)
90-187585	1 µm, 128 oz. (3.8 L)

Both powder and suspensions contain 99.99% pure Al_2O_3 .

FinalPrep™ Alumina Polishing Solution

This polycrystalline alumina solution is excellent for final polishing applications for nearly any material. With a pH between 9 and 10, the basic chemical element produces good delineation of material boundaries. It works exceptionally well with precious metals like gold (Au) and silver (Ag). Should be used with cloths recommended for "final polishing".

Item	Description
90-187705	0.05 µm, 6 oz. (180 mL)
90-187740	0.05 µm, 32 oz. (950 mL)
90-187775	0.05 µm, 128oz. (3.8 L)

