

500S Colloidal Silica Slurry

Resinox Enhanced

Description

Ultra-Sol 500S is a non-drying colloidal silica slurry designed for polishing a wide range of precision Opto-Electronic materials.¹ A staple in any optician's arsenal, 500S has been in popular use for over 20 years, and its trademark blue color is now widely recognized by expert polishers throughout the industry.

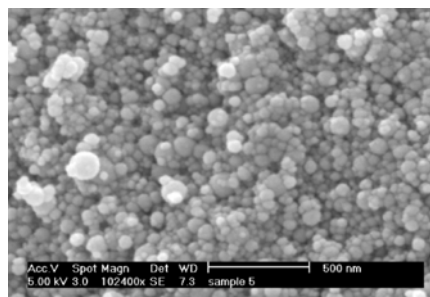
The Ultra-Sol 500S is a high-purity colloidal silica slurry with a specially designed alkaline dispersion. This reduces problems caused by colloidal particles drying, caking or crystallizing on all exposed surfaces. The end result is an overall reduction in latent scratches, cleaning costs, staining, and waste.

Ultra-Sol 500S is capable of producing surfaces of less than 5Å RMS in a pad process, and less than 1Å in a pitch environment. The 500S performs well in recirculation applications due to the durability of the primary particle.

The information provided in this note should be used as a starting point for the customer's application.

Physical Characteristics

SF-500S	
Mean Particle Size	78nm
pH	9.9
Solids Content (By Weight)	40%



500S SEM Image

Handling

Ultra-Sol 500S is an aqueous based slurry. However, to avoid skin or eye irritation, handlers should use personal protective equipment including, rubber gloves, protective clothing, and eye protection. Follow all MSDS and label precautions and use appropriate industrial safety and hygiene practices when handling or using this product.

It is recommended that Ultra-Sol 500S be used in pure form. However, if desired, it may be diluted up to a 1:1 ratio of using only high-quality de-ionized water (>18 M ohm). Mild agitation is all that is needed to keep the diluted slurry suspended. The product should be mixed periodically 10-20 min/day, by re-circulation or mechanical stirring. Storage and re-use of diluted slurry is not recommended. If diluted slurry is allowed to sit long enough to settle out of suspension, re-use of the settled solids, without proper rework, may cause some minor scratching and should be avoided. Due to the product unique formulation, it is further recommended that the user should not attempt adjustment of the pH. If a different pH is required, please contact your EMINESS Technologies Applications Engineer for assistance in attaining the desired results.

Storage

Storage tanks and distribution piping should be constructed of engineered plastic of polyethylene, polypropylene or fluoropolymer. Materials such as aluminum, copper, brass and PVC should be avoided.

Standard packaging includes five (5) gallon pails and fifty-five (55) gallon drums. One (1) gallon bottles are also available upon request. All containers are High Density Polyethylene (HDPE). Maintain storage in a temperature-controlled environment, between 40 and 100°F, avoiding prolonged exposure at either extreme.

Disposal

Dispose in accordance with all applicable regulations.

If you have any questions or comments, please don't hesitate to call your EMINESS Technologies, Inc. Applications Engineer.

¹The Ultra-Sol 500S is known to work well on the following Opto Electronic substrates:

Formula	Name	Formula	Name	Formula	Name
GaAs	Gallium Arsenide	GaN	Gallium Nitride	InGaP	Indium Gallium Phosphide
LiTaO3	Lithium Tantalate	SiOX	Quartz	Ge	Germanium
ZnSe	Zinc Selenide	SiC	Silicon Carbide	SiGe	Silicon Germanium
GaSb	Gallium Antimonide	InP	Indium Phosphide	LiNbO3	Lithium Niobate
Si	Silicon	Al2O3	Sapphire	ZnS	Zinc Sulfide
ZnO	Zinc Oxide	YAG	Yttrium Aluminum Garnet	AlN	Aluminum Nitride

About Eminess

For over twenty years Eminess has been providing quality, precision polishing consumables to a vast array of industries. In addition to polishing slurries, Eminess also manufactures a variety of complimentary products, including polishing pads, waxless fixturing, carrier films, and pad conditioners.



We have invested heavily in the tools and infrastructure necessary to provide superior support to our customers, and guarantee quality products through strict observance of ISO 9001 standards. Our knowledgeable support and customer service staff stands ready to assist with polishing projects of any size. For superior products, support, and results, think Eminess!

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