

**APPLICATION NOTES**

June 2008

**Introduction**

Ultra-Sol “L” Alumina Suspensions are unique permanent suspensions of high quality levigated aluminum oxide abrasives. The unique alkaline chemistry provides both chemical enhancement for faster material removal rates, and a medium that holds the abrasive in long-term suspension, providing a homogeneous material with excellent shelf life.

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

**Use**

This series of suspensions is intended for bulk removal, lapping, and coarse grinding steps in the polishing process. The proprietary chemistry used to create the permanent suspension and enhanced removal rates is water-based and does not present the disposal problems traditionally associated with oil or other petroleum bases previously used in the polishing industry.

Ultra-Sol LX-PS Standard Alumina Suspensions are available in the following sizes:

Agglomerate-Free Alumina Suspension		% Al <sub>2</sub> O <sub>3</sub>
Suspension	Functional Particle Size	Solids
L1-PS	1 μm	15
L2-PS	2 μm	20*
L3-PS	3 μm	15
L5-PS	5 μm	15
L9-PS	9 μm	15
L12-PS	12 μm	15
L15-PS	15 μm	15
L18-PS	18 μm	15
L20-PS	20 μm	15
L25-PS	25 μm	15

\*Custom formulation for the fiber optics industry.

It is recommended that **Ultra-Sol “L” Alumina Suspensions** be used in pure form. However, if diluted, use 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, Inc. Applications Engineer, for assistance in attaining the desired results.

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.

**Ultra-Sol Alumina Suspensions** are safe, aqueous based slurries. 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.

### **Precision / Fine Polishing**

Eminess Technologies, Inc. has a complete line of **Ultra-Sol** permanent alumina suspensions made from high purity (>99.99%) alumina, in both alpha and gamma, standard and agglomerate-free versions available for all of your precision and fine polishing applications.

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