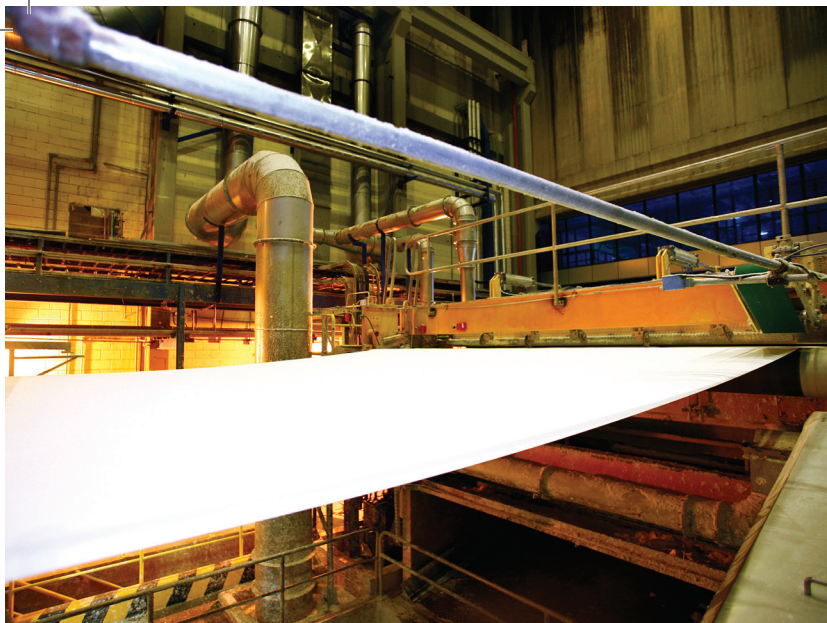


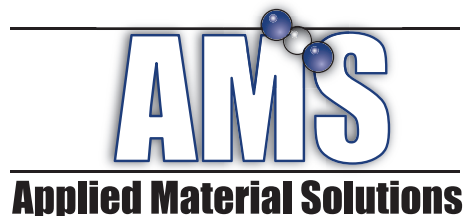


Colloidal Silica Technology

Applied Material Solutions is now offering colloidal silica to its North American customers. Our proprietary manufacturing process produces a uniform distribution profile to ensure a low percentage of off-size particles and contaminants.

Our goal is to provide our partner companies with colloidal silica to match their specified requirements, while also offering controlled particle size distribution for consistent application performance.

For additional information, or to challenge us to meet your specific colloidal needs, please contact us today.



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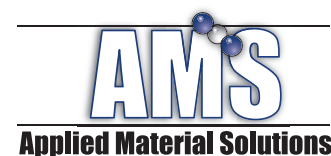
www.appliedmaterialsolutions.com

AMSol™ Colloidal Silica

Product	% Solids	Mean Particle Size (nm)	pH (typical)	Surface Area (m ² /g)	Density (g/cc)	Applications			Functions
▲ AMSol™ 8 SM	8%	5	10.0	600	1.05	▲ Beverage Clarification Water Treatment	Concrete & Mortar	Protective Coating	Densifier for cement/concrete
▲ AMSol™ 8 SMX	6%	3.5	10.0	857	1.04	▲ Beverage Clarification Water Treatment	Non-stick Coating Pulp & Paper	Protective Coating Adhesives	Retention aid for fines in paper
▲ AMSol™ 15	15%	7	9.0	429	1.14	▲ Cosmetics			Adhesion and binding Increased surface friction
▲ AMSol™ 15 SM	15%	5	10.5	600	1.13	▲ Beverage Clarification	Water Treatment	Pulp & Paper	Flocculant aid for waste water filtration Retention aid for fines in paper
▲ AMSol™ 20 SM	18%	7	9.5	429	1.14	▲ Beverage Clarification	Water Treatment	Concrete & Mortar	Densifier for cement/concrete
AMSol™ 30	30%	12	10.2	250	1.19	Catalyst Insulation Coating Pigment Pulp & Paper	Concrete & Mortar Investment Casting Refractory Materials	Decorative Coating Paper, Inkjet, & Photo Textiles & Fabrics	Binder for investment casting Anti-soilant in textiles Anti-block in films
AMSol™ 30 SM	30%	7	10.0	429	1.20	Batteries Decorative Coating Paper, Inkjet, & Photo	Catalyst Investment Casting Refractory Materials	Concrete & Mortar Leather Pulp & Paper	Scratch resistance for surface applications and coatings Paper fines retention Cement densification Anionic coagulant
AMSol™ 4012	40%	12	9.7	250	1.28	Adhesives Investment Casting Refractory Materials	Catalyst Non-stick Coating Wood Coating	Concrete & Mortar Protective Coating	Binder for ceramic fiber shapes Rigidizing agent for refractory and ceramic mats Attrition resistance in catalysts
AMSol™ 4015	40%	15	9.7	200	1.28	Catalyst Refractory Materials	Concrete & Mortar	Investment Casting	Attrition resistance in catalysts Binder for ceramic fiber shapes Rigidizing agent for refractory and ceramic mats
AMSol™ 50	50%	20	8.5	150	1.38	Adhesives Polishing Refractory Materials	Concrete & Mortar Pigment Textiles & Fabrics	Investment Casting Plastic Pulp & Paper	Rigidizing agent for refractory and ceramic materials Anti-slip properties for paper Density gradient for most applications
AMSol™ HT	50%	50	9.0	60	1.38	Cleaning Products Paper, Inkjet, & Photo Polishing	Concrete & Mortar Pigment Electronics	Leather Plastic Pulp & Paper	Polishing agent for electronics and cleaning agents Strength enhancing when used in plastics, mortar, concrete

Applied Material Solutions offers a custom formulated "W" (winterized) version of all AMSol™ products listed above that can be used after thawing. The suspension is recoverable with simple mixing.*

*This proprietary blend depresses the freeze point but will not prevent freezing or instability due to extremely low temperatures. Winterized products should still be protected from freezing as a precaution.



▲ Coming soon—FG Colloidal Silica

Applied Material Solutions will be offering food-grade options signified by the ▲ on the chart above.