



AMS

Applied Material Solutions



AMSIL™

Hydrophobic Silica

FUMED & PRECIPITATED



Defoamers



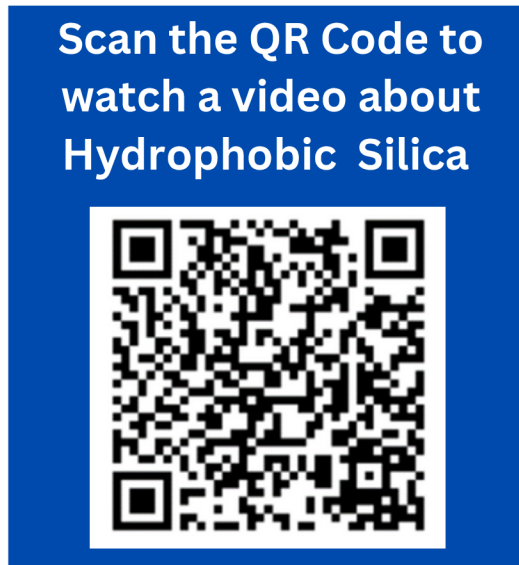
Fire extinguishers



Plastics



Silicone sealants



Greases



Silicone rubber



Paints, inks, coatings and toners



Cosmetics



Polyester resins



In 1991, Performance Process, Inc.(PPI) was founded in Mundelein, Illinois to produce fumed and precipitated treated silicas. Nine years later PPI installed a new state-of-the-art treated silica production unit at the Nottingham Company facility in Atlanta, Georgia, which more than doubled their capacity and reduced delivery time for their customers in the Southeast. In 2015, AMS purchased PPI, and in 2016 we expanded our silica production and consolidated facilities to our Burlington, WI plant.

Applications

Our fumed and precipitated silicas are used in a wide range of applications including adhesives, agriculture, cable gels, coatings, cosmetics, defoamers, fire extinguishers, food, greases, inks, paints, plastics, polyester resins, silicone rubber, silicone sealants, toners, and more areas.

Benefits

The benefits of fumed and precipitated silica are diverse. These ingredients can work as an adsorbent, and they can provide anti-setting, anti-sagging, anti-setoff, anti-blocking and reinforcement. They encourage the free flow of

powders, improve mechanical and optical properties, pigment stabilization and dispersion, and print definition. In addition, improvements are achieved when they are used for processability, hydrophobicity control, thickening, thixotropy, rheology control, and suspension and stability behavior.

Excellent Quality

The foundation of every product we develop is its formulation. We lead the industry in accuracy, consistency and performance. In our cutting edge laboratories, we have the equipment needed to ensure that procedures are followed meticulously. Our attention to detail throughout the process results in substantial savings for our customers in both time and costs.

Collaboration

It is essential that we collaborate with our customers at every step in the formulation process, from initial discussion through development, installation, production, and performance evaluations. For us, working closely together is the reason for our success.



Hydrophobic Silica - Fumed & Precipitated

AMSiL

Adsorbent and Carrier

Adsorbs gaseous, liquid or solid materials and acts as a carrier to allow conversion of liquid and pastes into powder, making them considerably easier to dose and handle.

Applications

- Coatings & paints
- Polyester resins & gel coats
- Pharmaceuticals & cosmetics
- PVC based plastics

Defoamers and Antifoams

- Food - direct and indirect applications
- Paints and coatings
- Inks
- Adhesives
- Paper
- Textiles

Electrostatic Charge Effects

Reduce the tendency of plastic powders to acquire a negative electrostatic charge, eliminating characteristics that are undesirable.

Applications

- Batteries
- Coatings & paints
- PVC based plastics

Free Flow and Storage

Greatly increases the free flow and storage stability of powdered substances that have a tendency to cake.

Applications

- Coatings & paints
- Defoamers & antifoams
- Pharmaceuticals & cosmetics
- Polyester resins & gel coats
- Printing inks
- PVC based plastics
- Fire extinguisher powder
- Table salt
- Tomato powder
- Tablet powder blends
- Plastic powders
- Toners

High Temperature Insulation

Outstanding thermal insulation properties due to the fact that amorphous silicon dioxide has a very low solid state conductivity.

Applications

- Cable gels
- Rubber & rubber compounding
- Thermal insulation





Providing Improvements for Many Products

Printer and Copier Toner

Improves the flow characteristics and charge stability as well as, enhances the resolution and print quality of toners.

Applications

- Printing inks and toners

Reinforcement of Elastomers

Improves mechanical properties, such as tensile strength, elongation at break, and tear resistance, and helps to control the influence of temperature on mechanical properties.

Applications

- Adhesives & sealants
- Rubber & rubber compounds
- Molding, sealing & casting compounds

Electrostatic Charge Effects

Prevent or delay sedimentation of solids in liquid systems, re-disperse settled sediments without problems, and break down solid particles and prevent them from recombining.

Applications

- Coatings & paints
- Resins containing fillers

Thickening and Thixotropy

Particles restore original viscosity when in a state of rest, reversing thickening with a minimum amount of energy.

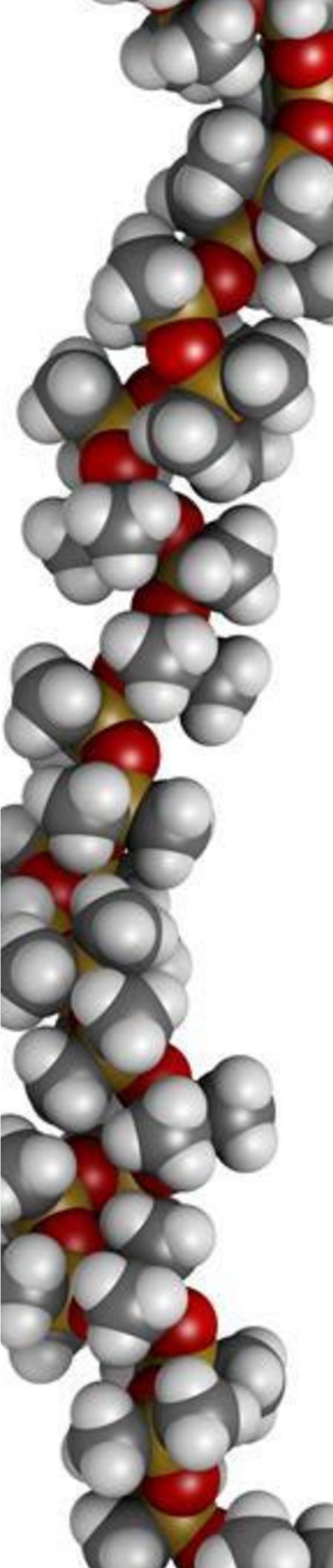
Applications

- Adhesives & sealants
- Cable gels
- Greases
- Polyester resins & gel coats
- Resins containing fillers



Electrostatic Charge Effects

Remains chemically stable when stored under dry conditions, protected from volatile substances, and used within two years.



AMSiL Hydrophobic Silica—Fumed

Product	Properties						
	surface area (BET) m ² /g	Average particle size nm	Tapped density g/l	Ignition loss wt%	Moisture wt%	pH	SiO ₂ content wt%
AMSiL-F							
H22	130±30	12	50	4.0-6.0	≤0.5	4.0-6.0	≥99.8

AMSiL Hydrophobic Silica—Precipitated

Product	Properties					
	Specific surface area (BET) m ² /g	Average particle size μm	Bulk density lbs/ft ³	pH	Form	Hydrophobicity Level
AMSiL						
35	120-140	6-7	8-9	8-9	Powder	Standard
35 FGK	120-140	6-7	8-9	8-9	Powder	Standard
355	120-140	6-7	8-9	8-9	Powder	Med high
358	120-140	6-7	8-9	8-9	Powder	Highest
63	140	9	8-9.5	8-9	Powder	Standard
63 FGK	140	9	8-9.5	8-9	Powder	Standard
66	140	4	8-9	10.5 max	Powder	Standard
66 FGK	140	4	8-9	10.5 max	Powder	Standard
665	140	4	8-9	10.5 max	Powder	Med high
668	140	4	8-9	10.5 max	Powder	Highest
70 FGK	100-110	7	8-9.5	8-9	Powder	Standard
708	100-110	7	8-9.5	8-9	Powder	Highest
80	80	12	8-10	8-9	Powder	Standard
80 FGK	80	12	8-10	8-9	Powder	Standard
805	80	12	8-10	8-9	Powder	Med high
90X	90	8.5	8-10	8-9	Powder	Standard



AMS: Our Story

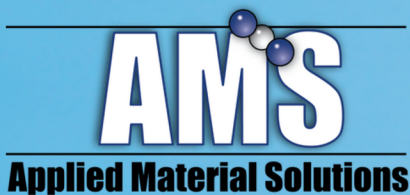
About AMS

Scan the QR codes to learn more about AMS.



AMS: Factory Tour

Applied Material Solutions, Inc. offers hydrophobic treated silica, antifoam and defoamer products, silicone emulsions, colloidal silica, corn oil demulsifiers and more. AMS is headquartered in Elkhorn, WI, with manufacturing plants in Burlington, WI and Rockton, IL.



Applied Material Solutions, Inc.
Headquarters

1001 E. Centralia Street
Elkhorn, WI 53121



(262) 723-6595

info@amsi-usa.com

www.appliedmaterialsolutions.com

