



SILQUEST A-1100* Silane

Product Description

Silquest A-1100 silane, *gamma*-Aminopropyltriethoxysilane, is a versatile amino-functional coupling agent used over a broad range of applications to provide superior bonds between inorganic substrates and organic polymers.

Typical Physical Properties

Physical Form	Liquid
Color	Clear, colorless
Specific Gravity at 25/25°C	0.9500
Boiling Point at 760 mm Hg, °C (°F)	220 (428)
Refractive Index, n_D 25°C	1.420
Flash Point, Pensky-Martens Closed Cup ⁽¹⁾ , °C (°F)	96 (205)

(1) ASTM Method D 93

Solubility

Silquest A-1100 silane is completely and immediately soluble in water (with reaction), alcohol and aromatic and aliphatic hydrocarbons. Ketones are not recommended as diluents. Hydrolysis is noticeably exothermic and releases ethanol.

At GE Advanced Materials — Silicones, our versatile materials are the starting point for our creative approach to ideas that help enable new developments across hundreds of industrial and consumer applications. We are helping customers solve

product, process, and performance problems; our silanes, fluids, elastomers, sealants, resins, adhesives, urethane additives, and other specialty products are delivering innovation in everything from car engines to biomedical devices. From

helping to develop safer tires and keeping electronics cooler, to improving the feel of lipstick and ensuring the reliability of adhesives, our technologies and enabling solutions are at the frontline of innovation.



GE imagination at work

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Chemical Structure

The silicon-containing portion of the molecule provides strong bonding to substrates. The primary amine function reacts with a wide array of thermoset, thermoplastic and elastomeric materials. Silquest A-1100 silane has the following structural formula:



Potential Applications and Performance

Coatings, Adhesives and Sealants

This aminosilane is an excellent adhesion promoter in acrylic coatings, adhesives and sealants. With polysulfide, urethane, RTV silicones, epoxy, nitrile, and phenolic adhesives and sealants, the product improves pigment dispersion and maximizes adhesion to glass, aluminum and steel.

Glass-Reinforced Resin Systems

In glass-reinforced thermosets, Silquest A-1100 silane enhances the flexural, compressive and interlaminar shear strengths before and after exposure to humidity. This product greatly improves wet electrical properties. Glass-reinforced thermoplastics, polyamides, polyesters and polycarbonates exhibit increased flexural and tensile strengths before and after wet exposure when this silane is used.

Glass Fiber and Mineral Wool Insulation

As a phenolic resin binder additive, Silquest A-1100 silane imparts moisture resistance and allows recovery after compression.

Mineral-Filled Resin Systems

Silquest A-1100 silane maximizes the physical and electrical properties of mineral-filled phenolics, epoxies, polyamides, polybutylene terephthalate and a host of other thermoset and thermoplastic composites. Filler wetting and dispersibility in the polymer matrix are also improved.

Foundry Applications

In shell molding, this silane strengthens the bond between the phenolic binder and foundry sand.

Grinding Wheels

The product promotes an improved, water-resistant bond between the abrasive grit and phenolic resin binder.

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Product Safety

Customers considering the use of any of GE Advanced Materials - Silicones products should consult the latest Material Safety Data Sheets and labels for product safety information. Customers must evaluate GE Advanced Materials - Silicones products and make their own determination as to fitness of use in their particular applications. For Material Safety Data Sheets contact the GE Advanced Materials - Silicones sales office nearest you. Customers must ensure that all applicable federal, state, and local requirements have been met before handling any of the products mentioned in the text.

Emergency Service

GE Advanced Materials - Silicones maintains an around-the-clock emergency service for its products. The American Chemistry Council (CHEMTREC), Transport Canada (CANUTEC), and the Chemical Emergency Agency Service also maintain an around-the-clock emergency service for all chemical products:

Location	GE Advanced Materials - Silicones Products	All Chemical Products
Mainland U.S., Puerto Rico	800.809.9998	CHEMTREC: 800.424.9300
Alaska, Hawaii	304.926.8418 (collect)	CHEMTREC: 800.424.9300
Canada	304.926.8418 (collect)	CANUTEC: 613.996.6666 (collect) or CHEMTREC: 800.424.9300
Europe, Middle East, Africa	+32.(0)14.58.45.45 (Belgium)	CHEMTREC: +1-703.527.3887 (collect)
Latin America, Asia/Pacific, all other locations worldwide	+304.926.8418 (collect)	CHEMTREC: +1-703.527.3887 (collect)
At sea	Radio U.S. Coast Guard, which can directly contact GE Advanced Materials - Silicones at 800.809.9998 or CHEMTREC at 800.424.9300.	

DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

Principal Locations

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	RTV Products-Elastomers 800.332.3390	304.746.1623
	Sealants and Adhesives and Construction 877.943.7325	304.746.1654
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