

Silquest^{*} TEOS-40 Silane

Product Description

Momentive Performance Materials Silquest TEOS-40 silane is a hydrolyzed and oligomerized form of ethyl silicate. It is a mixture of monomers, dimers, trimers and cyclic polysiloxanes. The average degree of polymerization is five siloxane, or -Si-O-Si- units, and the average molecular weight is 750.

Key Features and Typical Benefits

The chemical structure of Silquest TEOS-40 silane offers:

- Compatibility with a wide range of solvents
- A source of liquid silica, at 40% by wt., as SiO₂

Typical Physical Properties

Physical Form	Liquid
Appearance	Clear, colorless
Molecular Weight, Average	750
Volatiles (by volume), %	<2.0
Color (Pt/Co)	<10
Specific Gravity, 25/25°C	1.04
Acidity (as HCl)	10 ppm max
Flash Point, Tag Closed Cup, °C (°F)	38 (100)
Viscosity, cPs at 25°C	5.2

Momentive Performance Materials provides versatile materials as 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.



Potential Applications

Silquest TEOS-40 silane may be an excellent candidate for a binder in zinc-rich (corrosion resistant) coatings, or in investment castings for molds and cores.

Silquest TEOS-40 silane may also be useful as a raw material in sol-gel systems.

Formulation Information

A typical formulation for a corrosion resistant 'zinc-rich' coating may consist of the following:

The preparation of the base resin, or binder;

Binder	Parts
Silquest TEOS-40 silane	70
Ethylene glycol monoethyl ether	20
Silquest A-1120 silane	<u>10</u>
	100

Followed by the formulation for the coating;

Coating	Parts
Binder	64.5 (contains Silquest A-1120 silane and solvent, as above)
Mica	24.5 (water ground - 325 mesh)
Moisture scavenger	2.5 (molecular sieve)
Anti-settling agent	8.0
Xylene	98.0
Thickener	5.0
Zinc Dust	<u>297.0</u>
	500.0

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

Product Safety, Handling and Storage

Customers considering the use of this product should review the latest Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at www.momentive.com or, upon request, from any Momentive Performance Materials representative. Use of other materials in conjunction with Momentive Performance Materials products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

Emergency Service

Momentive Performance Materials 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	Momentive Performance Materials Products	All Chemical Products
Mainland U.S., Puerto Rico	518.233.2500	CHEMTREC: 800.424.9300
Alaska, Hawaii	518.233.2500	CHEMTREC: 800.424.9300
Canada	518.233.2500	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	+518.233.2500	CHEMTREC: +1-703.527.3887 (collect)
At sea	Radio U.S. Coast Guard, which can directly contact Momentive Performance Materials at 518.233.2500 or CHEMTREC at 800.424.9300.	

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

Principal Locations

Regional Information	Phone	Fax
North America World Headquarters 187 Danbury Road Wilton, CT 06897, USA	800.295.2392	607.754.7517
Latin America Rodovia Eng. Constâncio Cintra, Km 78,5 Itatiba, SP – 13255-700 Brazil	+ 55.11.4534.9650	+ 55.11.4534.9660
Europe, Middle East, Africa and India Leverkusen Germany	00.800.4321.1000 + 31.164.293.276	+ 31.164.241750
Pacific Akasaka Park Building 5-2-20 Akasaka Minato-ku, Tokyo 107-6112 Japan	+ 81.3.5544.3100	+ 81.3.5544.3101
Customer Service Centers		
North America Charleston, WV 25314, USA E-mail: cs-na.silicones@momentive.com	Specialty Fluids 800.523.5862	304.746.1654
	UA, Silanes, Resins, and Specialties 800.334.4674	304.746.1623
	RTV Products-Elastomers 800.332.3390	304.746.1623
	Sealants and Adhesives and Construction 877.943.7325	304.746.1654
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