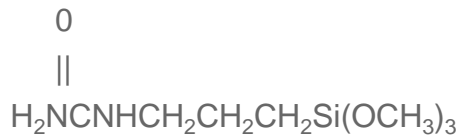


Silquest* A-1524

Description

Silquest A-1524 silane, gamma-ureidopropyltrimethoxysilane, is an ureidosilane used to promote adhesion between a wide range of resins and metal or mineral substrates, or to couple these resins to reinforcements such as glass fibers, mineral fillers or glass spheres.

The chemical structure of Silquest A-1524 silane is:



The molecular weight of the silane is 222.3 grams per mole.

Key Features and Typical Benefits

- Formulated without protic and nonprotic solvents
- Soluble in water
- Does not contribute to color when aged in resin formulations
- N-H reactivity without the strong basic characteristics of aminosilanes
- Longer pot life than aminosilane in reactive phenolic, epoxy, urea-melamine or polyurethane resin formulations

Typical Physical Properties⁽¹⁾

| | |
|------------------|----------------|
| 1. Physical Form | Viscous liquid |
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|---|------------------------------|
| 2. Color | Pale yellow |
| 3. Active Ingredient | Contains no diluents |
| 4. Density, 25 °C | 1.1500 grams/cm ³ |
| 5. Refractive Index, n_D at 25 °C | 1.459±0.001 |
| 6. Flash Point ⁽²⁾ , Tag Closed Cup, °C (°F) | 99 (210) |
| 7. Boiling Point Range, °C at 1,1013 hPa | 217-250 |

(1) Typical properties are average data and are not to be used as or to develop specifications.

(2) ASTM Method D56

Potential Applications

- Coupling agent for insulation phenolic wool binders and glass fiber sizes used to reinforce nylon resins
- Finish for woven glass fiber fabrics
- Treatment for particulate fillers used to reinforce nylon, phenolic or epoxy resin
- Additive for foundry sand and abrasive grinding wheel binders
- Adhesion promoter in urethane-based coatings, sealants and caulks
- Component in primers

General Considerations for Use

Silquest A-1524 silane use level is dependent upon the surface area of the particulate filler or glass fiber reinforcement. Typical starting concentrations may range from 0.5 to 1 weight percent, based upon the weight and type of reinforcement used. Sand and other low surface area fillers or substrates may require less than 0.1 weight percent silane.

When Silquest A-1524 silane is added to a resin formulation, the use level is typically in the range of 0.5 to 1 weight percent, based on the weight of the resin.

Silquest A-1524 silane is soluble in methanol, ethanol, acetone, toluene and water. The silane hydrolyses in water and releases methanol. The hydrolysis product of Silquest A-1524 silane, gamma-ureidopropylsilanetriol, is stable at one weight percent in water at pH of 4 for greater than 72 hours.

Silquest A-1524 silane should be protected from low temperatures as it freezes at less than 5 °C. While freezing does not harm Silquest A-1524 silane, should it occur, the material should be well stirred after thawing to ensure uniform concentration.

Availability

Silquest A-1524 silane is currently available in drum quantities.

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 should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at www.momentive.com or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM 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.

Contact Information

For product prices, availability, or order placement, contact our customer service at Momentive.com/CustomerService/

For literature and technical assistance, visit our website at: www.momentive.com

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