



## Technical Data Sheet

### DOWSIL™ Z-6132 Silane

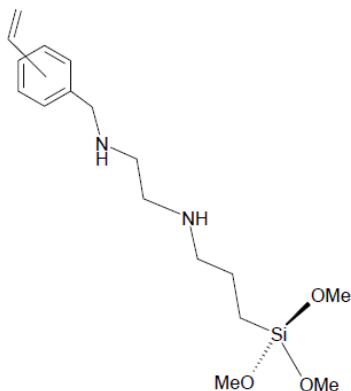
Easily dilutable version of DOWSIL™ Z-6032 Silane

#### Features & Benefits

- Can be direct diluted with water
- Improved adhesion of plastic resins to inorganic surfaces
- Good resin wet-out of treated fiberglass fabric
- Increased wet and dry strength properties of composites
- Organic and inorganic reactivity

#### Composition

- Vinyl benzyl amino ethyl amino propyl trimethoxysilane (average structure)



#### Applications

- Useful as a coupling agent on fiberglass fabric for printed circuit board composites
- The chemical reactivity is compatible with a wide range of organic and inorganic materials to improve composite properties

#### Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Chloride ion in solution	%	2.7
Refractive Index		1.398
Viscosity (25°C)	cst	5.4
Active ingredient	%	37

**Description**

DOWSIL™ Z-6132 Silane contains vinylbenzyl and amino organo-functional groups and a trimethoxysilyl group for reactivity with inorganic surfaces. The product is supplied in methanol.

**Benefits**

Possessing both organic and inorganic reactivity, DOWSIL Z-6132 Silane can react with organic polymers and inorganic particles and surfaces such as glass fiber. As a coupling agent it can be used either as an additive to a compound or as surface pre-treatment.

**How To Use**

DOWSIL Z-6132 Silane can be applied to inorganic surfaces as a dilute aqueous solution (0.1 to 0.5% silane concentration). Aqueous solutions are prepared by adjusting the pH of the water to about 3.5 to 4.0 with acetic acid and then adding the silane and stirring. After adding the silane to the acidified water, it is necessary to stir the mixture for about 15 minutes before it hydrolyses and forms a clear homogeneous solution. Higher concentrations of silane in water are not stable indefinitely and after standing several days may deposit an oily phase of condensed polysiloxane. It is recommended that aqueous solutions of these silanes be used within 24 hours of preparation. Old solutions will begin to haze - an indication of a significant amount of siloxane condensation.

Dow silanes can also be applied as a solution in many common organic solvents. Solubility and stability of a specific organic solvent should, however, be verified before use in a commercial process.

In the case of mineral fillers, the mineral can be treated by mixing with the silane at very low shear for several minutes without any additional solvent. Alternatively, the silane can be diluted in water or a solvent as described above.

After applying the silane by a suitable method, the glass or mineral surface should be dried for 5 to 15 minutes at 104°C to 121°C (220°F to 250°F) to drive the condensation of silanol groups at the surface and to remove traces of methanol from the treatment. Optimum application and drying conditions such as time and temperature should be determined for each application prior to use in a commercial process.

**Handling  
Precautions**

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT [WWW.CONSUMER.DOW.COM](http://WWW.CONSUMER.DOW.COM), OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

**Usable Life And Storage**

When stored at or below 40°C (104°F) in the original unopened containers, this product has a usable life of 12 months from the date of production.

**Packaging**

This product is available in drums. Samples are available in 500 ml bottles.

**Limitations**

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

**Health And Environmental Information**

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, [www.consumer.dow.com](http://www.consumer.dow.com) or consult your local Dow representative.

<http://www.consumer.dow.com>

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