Product Information
Paints, Inks & Coatings

DOW CORNING

Dow Corning® Z-6121 Silane

FEATURES

- Effective over a wide range of concentrations
- Use as a curing agent for silicone resin-based coatings
- Eliminates the oven cure normally required to develop optimum properties

BENEFITS

- Improves adhesion and salt-spray resistance of epoxy coatings
- Improves adhesion of Alkyd finishes to glass

COMPOSITION

- Amino-methoxysilane
- 62% active
- 34% solids in alcohol

Silane adhesion promoter recommended for use with epoxy coatings, silicone-resin based coatings and alkyd finishes

APPLICATIONS

- Can be incorporated into epoxy coatings
- Can be used as a room-temperature curing agent for silicone resin based coatings
- Can be used with alkyd coatings

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Parameter	Unit	Value
Color	APHA	Straw/clear, 400 maximum
Active content	%	62
Solids content	%	34
Specific gravity at 25°C/15.6°C (77°F/60.08°F)		0.91
Viscosity at 25°C (77°F)	mm^2/s	5
Flash point - closed cup	°C	26.6
	°F	79.8
Solvent		n-Butanol
Suitable diluent		n-Butanol

* CTM: Corporate Test Method, copies of CTMs are available on request.

DESCRIPTION

Dow Corning® Z-6121 Silane is a multi-purpose silane adhesion promoter recommended for use with epoxy coatings, silicone resin-based coatings and alkyd finishes.

HOW TO USE

Epoxy coatings

Use *Dow Corning* Z-6121 Silane with epoxy curing agent. Test to determine the most effective concentration (Dow Corning testing indicates 4% concentration, based on total epoxy and curing-agent solids).

Silicone Resins

Dilute *Dow Corning* Z-6121 Silane with butanol in a 1:4 additive:butanol ratio. Add to silicone coating in a 20-24:100 solution:coating ratio. The pot life is 3-5 hours.

Alkyd Coatings

The recommended concentration of *Dow Corning* Z-6121 Silane is 1-2:100, blended immediately before application.

HANDLING PRECAUTIONS

Skin and eye contact should be avoided. It is recommended that rubber gloves and safety glasses be worn when handling *Dow Corning* Z-6121 Silane.

In case of skin contact, flush with plenty of water and treat as a caustic burn. In case of eye contact, flush eyes with plenty of water for at least 15 minutes and get immediate medical attention.

Dow Corning Z-6121 Silane is supplied in a flammable solvent. Avoid heat, sparks and open flame. Always provide adequate ventilation. Avoid prolonged breathing of vapours and contact with skin and eyes.

When using solvents avoid heat, sparks and open flame. Always provide adequate ventilation. Obtain and follow handling precautions from the solvent supplier.

Product safety information required for safe use is not included. Before handling, read product and safety data sheets and container labels for safe use, physical and health hazard information. The material safety data sheet is available on the Dow Corning website at www.dowcorning.com. You can also obtain a copy from your local Dow Corning sales representative or Distributor or by calling your local Dow Corning Global Connection.

USABLE LIFE AND STORAGE

When stored at or below 25°C (77°F) in the original unopened containers, this product has a usable life of 36 months from the date of production.

PACKAGING

This product is available in 35 lb and 375 lb (16kg and 170kg) containers.

LIMITATIONS

Shipping: DOT Classification: flammable.

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

Caution:
Supplied in flammable solvent. Causes sever burns to the eyes and irritates the skin.

HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, www.dowcorning.com or consult your local Dow Corning representative.

LIMITED WARRANTY INFORMATION - PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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Table 1: Adhesion of epoxy coating (samples air dried for 7 days)

Curing agent	Adhesion, Crosscut Method, %					
	Aluminium		Glass		Steel	
	Dry	Wet[1]	Dry	Wet[1]	Dry	Wet[1]
Polyamide	100	0	100	0	100	0
Polyamide[2] - *Dow Corning* Z-6121 Silane	100	100	100	100	100	50
Diethylenetriamine (DETA)	100	0	100	0	100	0
DETA[1] - *Dow Corning* Z-6121 Silane	100	95	100	80	100	30

[1]Following immersion in distilled water for 24 hours.
[2]4% *Dow Corning* Z-6121 Silane based on total epoxy and curing agent solids.

Table 2: Salt spray resistance of epoxy coatings (clear coating 0.35mm thick, steel test panel)

Curing agent	Appearance after 20% salt spray exposure	
	1 day	7 days
Diethylenetriamine (DETA)	2	7
DETA + *Dow Corning* Z-6121 Silane	1	1

Rating scale 1 to 10, 1=excellent (pigmented coating – 5mm thick, steel test panel)

Curing agent	Appearance after 20% salt spray exposure	
	3 days	4 weeks
Diethylenetriamine (DETA)	No change	Severe blistering
DETA + *Dow Corning* Z-6121 Silane	No change	No change

Table 3: Typical properties of silicone resin-based coatings

Typical Property	Silicone paint[1] with additive	Silicone paint[1] without additive
Cure	2 to 3 days at 25°C (77°F)	1 hour at 250°C (482°F)
Color retention (after 24 hours at 250°C/482°F)	Slight darkening	Excellent
Heat resistance	Excellent	Excellent
Corrosion resistance	Excellent	Excellent
Weathering (2000 hours in weatherometer)	Excellent	Excellent
Pencil hardness	2B	B
Shelf life	3 to 5 hours	12 months

[1]A white paint based on *Dow Corning*® 808 Resin pigmented with rutile titanium dioxide at P/B of 1 to 1.

Table 4: Adhesion of alkyd coatings on glass

Resin	Adhesion, Crosscut Method, %				
After exposure to 100% relative humidity for:	**Dry**	**24 hrs.**	**48 hrs.**	**96 hrs.**	**8 days**
Long oil alkyd	50	0	0	0	0
Long oil alkyd with paint additive[1]	100	100	100	100	100
Silicone alkyd	50	0	0	0	0
Silicone alkyd with paint additve	100	100	100	100	100

[1]1% *Dow Corning* Z-6121 Silane based on total paint solids.