



## Technical Data Sheet

### XIAMETER™ OFS-6224 Silane

Vinylbenzylaminofunctional trimethoxy silane

Vinylbenzylaminofunctional trimethoxy silane coupling agent

#### Features & Benefits

- Improved adhesion
- Increased dry and wet composite flexural strength
- Possesses both inorganic and organic reactivity
- Improved adhesion
- Increased dry and wet composite flexural strength
- Increased dry and wet composite tensile strength

#### Composition

- Vinylbenzyl amine-functional silane

#### Applications

- Finish on woven glass fabric for the reinforcement of resins to improve physical strength properties of the composites
- Coupling agent for glass-reinforced laminates

#### Typical Properties

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

Test <sup>1</sup>	Property	Unit	Result
For Textile			
1100	Appearance		Greenish yellow
0004	Viscosity at 25°C (77°F)	cSt	1.0–3.0
0090	Flash point, Tag closed	°C	13
0090	Flash point, Tag closed	°F	55.4
0856	Chloride (in IPA solvent)	%	0.57 maximum
	Active content	%	66
	Solvent		Methanol

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

## Typical Properties (Cont.)

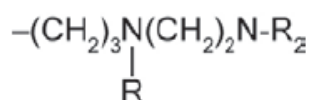
Test	Property	Unit	Result
<b>For Organofunctional Silanes</b>			
	Concentration of Active Ingredient Solids, approx.	%	33 (in methanol)
	Appearance		Grayish-green changing to reddish-brown liquid over time
	Specific Gravity at 25°C (77°F)		0.88
	Refractive Index at 25°C (77°F)		1.388
	Flash Point, Abel closed cup	°C (°F)	13 (55)
	Chloride Content		
	XIAMETER™ OFS-6224 Silane, approx	%	0.57
	XIAMETER™ OFS-6032 Silane, approx.	%	3.3
	Solubility		Low concentrations soluble in acidified (pH 3.5–4.0) water; soluble in methanol and methoxy propanol

## Description

XIAMETER™ OFS-6224 Silane is a reactive chemical containing styryl and amine organic groups and a trimethoxysilyl group. Possessing both organic and inorganic reactivity means the silane can react with organic resins and elastomers and glass fabric. As a coupling agent, it can be used either as an additive to a polymer or as a pretreatment on inorganic substrates.

XIAMETER OFS-6224 Silane is the neutralized (low chloride) version of XIAMETER™ OFS-6032 Silane. This product contains both organic and inorganic reactive groups. The organic groups can react with and bond to organic polymers; the methoxysilyl groups can react with, and bond to, glass or other inorganic surfaces. As a coupling agent, it is typically used to treat woven glass cloth from an aqueous solution at pH 3.5 to 4.0.

XIAMETER OFS-6224 Silane is composed of reaction products of vinyl benzylated ethane diaminopropyl-trimethoxysilane. The organofunctional group attached to the coupling agent has the general formula:



where R is either hydrogen or vinylbenzene

## How To Use

### For Textiles

XIAMETER OFS-6224 Silane is applied to fabrics from aqueous or alcoholic solutions.

Aqueous solutions are prepared by adjusting the pH of water to 4.0–4.5 with acetic acid and then adding the silane while stirring.

It is recommended to stir the mixture for 15 minutes to ensure complete, homogeneous hydrolysis. Solubility and stability of the specific solution should be verified before use in a commercial process.

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XIAMETER™ OFS-6224 Silane

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How To Use (Cont.)	<p>After applying the silane, the fabric should be dried briefly at 110–120°C (230–248°F) to effect condensation of the silanol groups at the surface and to remove traces of methanol.</p> <p>Optimum application and drying conditions, such as time and temperature, should be determined for each application prior to use in commercial process.</p>
Handling Precautions	<p>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 <a href="http://WWW.CONSUMER.DOW.COM">WWW.CONSUMER.DOW.COM</a>, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.</p>
Usable Life And Storage	<p>Product should be stored at or below 40°C (104°F) in original, unopened containers.</p>
Limitations	<p>This product is neither tested nor represented as suitable for medical or pharmaceutical uses.</p> <p>Not intended for human injection. Not intended for food use.</p>
Shipping Limitations	<p>DOT Classification: Flammable liquid.</p>
Health And Environmental Information	<p>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.</p> <p>For further information, please see our website, <a href="http://www.consumer.dow.com">www.consumer.dow.com</a> or consult your local Dow representative.</p>

<http://www.xiameter.com>

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