

Dynasylan® 1146

Oligomeric diaminosilane system

Technical data

Properties and test methods	Value	Unit	Method
Density (20 °C / 68 °F)	approx. 1,06	g/cm ³	DIN 51757
Viscosity (20 °C / 68 °F)	approx. 35	mPa·s / cSt	DIN 53015
Flash point	> 60	°C	EN 22719
Physical form	clear to light opaque; colorless to light yellowish	-	-

Registrations

Dynasylan® 1146

EINECS/ELINCS (EU):	Yes
AICS (Australia):	Yes
DSL/NDSL (Canada):	Yes / No
PICCS (Philippines):	No
TSCA (USA):	Yes
IECS (P.R. China):	Yes
ENCS (Japan):	Yes
ECL (South Korea):	Yes
REACH (Europe)	Exempted

Hydrophobic Dynasylan® 1146 diamino-functional silane is used in adhesives and sealants, and in coatings, to improve the adhesion of amino-reactive resins (e.g. RTV-silicones, two-part urethanes, silylated urethanes, MS polymers, and two-part epoxies) to inorganic surfaces, plastic surfaces, and inorganic fillers.

Dynasylan® 1146 silane is characterized by randomly distributed linear and cyclic oligosiloxanes and it fulfills the OECD polymer definition. Its low volatility and viscosity make compounding easy. Dynasylan® 1146 silane produces significantly less by-product (VOC) and has a correspondingly low odor level during application.

Safety and handling

Before considering the use of Dynasylan® products please read its Safety Data Sheet (SDS) thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use. The Safety Data Sheet is available after registration on our website www.dynasylan.com or upon request from your local representative, customer service or from Evonik Operations GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

Packaging, storage and shelf life

Dynasylan® 1146 is supplied in 25 kg pails, 200 kg drums and 1.000 kg IBC's.

In the unopened container Dynasylan® 1146 has a shelf life of min. 12 months from delivery.

Properties and applications

Dynasylan® 1146 silane is a versatile product that provides improved product performance and quality. Dynasylan® 1146 silane is soluble in common organic solvents (e. g. MeOH, EtOH, MEK). Dynasylan® 1146 silane may be used as an additive or as a primer in adhesives and sealants, and in coatings applications. When used as an additive, Dynasylan® 1146 silane can eliminate the need for special primers in numerous bonding applications. Specific systems that demonstrate improved adhesion when Dynasylan® 1146 silane is used include RTV silicones and hybrid silane-crosslinked systems. Additive loading levels of 0.5 to 1.5 wt.% Dynasylan® 1146 silane with regard to the overall formulation are typically recommended.

Dynasylan® 1146 silane can also be utilized as a mineral filler treatment. The diamino and alkyl functionalities result in unique functional filler properties when Dynasylan® 1146 treated minerals are incorporated into polymers.

Key Benefits

Because of its unique oligomeric structure, Dynasylan® 1146 silane exhibits excellent wetting on substrates and forms weather- and moisture-resistant bonds to substrates with difficult adhesion properties. The diamino functionality provides a reactive site for amino-reactive resins, whereas the alkyl functionality imparts hydrophobicity. Use of in silylated urethane or MS polymer adhesives and sealants results in:

- superior wet adhesion to inorganic (e.g. concrete, aluminum) and organic substrates (e.g. PVC)
- improvements in elongation and modulus, allowing the formulation of highly elastic products
- reduced yellowing and staining
- significantly reduced water uptake, allowing for water resistant adhesives

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