

Product Information

Dynasylan® SIVO 560

multifunctional, unsaturated silane system that can crosslink, methoxy functional

CAS NUMBER

confidential

PRODUCT DESCRIPTION

Dynasylan®SIVO 560 is a multifunctional silane system with a high concentration of unsaturated organic groups. It can be used as coupling agent and surface modifier in various applications.

Dynasylan® SIVO 560 is a clear, colorless liquid. It is soluble in alcohols, and aliphatic or aromatic hydrocarbons.

Typical Properties

| Property | Unit | Value |
|---|-------------------|-------------|
| Density (20 °C) DIN 51757 | g/cm ³ | 1.005-1.015 |
| Flash Point, min. DIN EN ISO 2719 | °C | 34 |
| Refractive Index (20°C) DIN 51423 | | 1.408 |
| Viscosity (20 °C) DIN 53015 | mPa·s | <10 |

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

Dynasylan® SIVO 560 is used as reactive coupling agent in various applications:

- as an additive for casting resins (unsaturated polyester, MMA), especially for the production of engineered stones
- as a surface modifier for pigments and fillers for thermosets (unsaturated polyester, MMA), thermoplastics (polyesters and polyolefins) and elastomers
- as an additive for filled, peroxide-crosslinked elastomers

Dynasylan® SIVO 560 is either applied to the inorganic substrate as a pretreatment by dipping, spraying, or coating

or it may be added directly to the resin matrix (additive process).

For pretreatment, the silane may be used:

- neat
- dissolved in an organic solvent
- dissolved in a mixture of organic solvent and water for partial hydrolysis

In the additive process Dynasylan® SIVO 560 is mixed with the resin or polymer before or together with the filler. A prerequisite for this method is compatibility of the silane with the resin since the silane must not react prematurely with the resin.

Dynasylan® SIVO 560 can achieve the following advantages, for example in a highly-filled unsaturated resin system:

- low resin content (< 10%)
- optimum dispersion of the fillers/pigments
- reduction in settling of the fillers/pigments
- a reduction in viscosity and improved flow properties of the resin
- improved mechanical properties of the molded products
- improved resistance of the molded products to boiling water, acids and alkalis

BENEFITS & ADVANTAGES

The alkoxy group of Dynasylan® SIVO 560 hydrolyzes in the presence of water (e.g. absorbed on inorganic surfaces) to produce methanol and reactive silanol (Si-OH) groups which can bond to a variety of inorganic substrates. The unsaturated groups interact with the polymer. Examples of suitable inorganic substrates are glass, glass fibers, glass wool, mineral wool, silicic acid, quartz, sand, cristobalite, wollastonite and mica; also suitable are aluminium hydroxide, kaolin, talc, other silicate fillers, metal oxides and metals.

Examples of suitable polymers include unsaturated polyester, acrylates and vinyl esters.

HANDLING & PROCESSING

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 on our website <https://silanes.evonik.com/en> or upon request from your local representative, customer service or from Evonik Operations GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

PACKAGING

Dynasylan® SIVO 560 is supplied in 25 kg, 200 kg steel drums and 940 kg bulk containers.

STORAGE

Local regulations have to be followed and applied.

From technical point of view a storage between 4°C and 40°C is beneficial.

The material is stable as long as not exposed to air or moisture.

SHELF LIFE

In originally sealed containers Dynasylan® SIVO 560 has a shelf life of at least 12 months from delivery.

Registration Listings

| Registry | Status |
|---------------------------------|--------|
| Australia (AIIC) | Yes |
| Canada (DSL) | Yes |
| China (IECSC) | Yes |
| European Union (EINECS/ELINCS) | Yes |
| Japan (ENCS) | Yes |
| South Korea (KECL) | Yes |
| Philippines (PICCS) | Yes |
| United States of America (TSCA) | Yes |

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