Dynasylan®

Product Information

Dynasylan® 4148

Polyethyleneglycol-functional alkoxysilane

PRODUCT DESCRIPTION

Dynasylan® 4148 is a ready-for-use silane and is soluble in water and most organic solvents.

Dynasylan® 4148 helps to control rheological properties and to reduce viscosity in highly-filled polymer systems, like aluminum trihydroxide-filled polyesters or SMC-pastes.

Contrary to most other organofunctional silanes, Dynasylan® 4148 features chemical polarity yet remaining chemically not reactive. Such a product is used as a hydrophilic compatibilizer rather than a covalent adhesion promoter.

Dynasylan® 4148 permits workable viscosities at well over 250 phr aluminum trihydroxide loading in unsaturated polyester resins. Further more, Dynasylan® 4148 can be used as anti-settling agent for corrosion inhibitors in glycol based cooling agents.

As a non-coupling silane Dynasylan® 4148 can also be used as a slipping agent to simply modify a surface.

Typical Properties

Property	Unit	Value
Chemical Name		Polyethyleneglycol-functional alkoxysilane
Density (20 °C) DIN 51757	g/cm³	~1.1
Freezing Point DIN ISO 3016, typical values are below -10 °C	°C	-10
pH Value (20°C), concentration 500 g silane/liter		4-5
Viscosity (20 °C) DIN 53015	mPa·s	10-20

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

Dynasylan® 4148 can be added neatly to a blend of filler or pigment and resin, or it can be used for the pretreatment of the filler or pigment.

Pre-treatment of the filler or pigment is best achieved in a high-speed mixer by praying Dynasylan® 4148 into a well-agitated filler or pigment bed. In order to obtain maximum efficiency of the treated filler or pigment, a good distribution of Dynasylan® 4148 throughout the filler or pigment surface is essential.

If the surface area of a filler or pigment is unknown, 1 percent by weight of Dynasylan® 4148, based on filler or pigment, is a convenient initial basis for Pre-treatment. Subsequently, the exact Dynasylan® 4148 loading should be determined empirically.

Moreover, Dynasylan® 4148 can act as a lubricant and wetting agent in the glass fibre industry in combination with silane coupling agents.

As a non-coupling silane, Dynasylan® 4148 can dramatically reduce the dispersion viscosity of aluminum trihydroxide and many other fillers and pigments. Because of better wetting and dispersion, outstanding filler or pigment loadings at a given viscosity can be realized with Dynasylan® 4148.

Dynasylan® 4148 helps to increase pigment dispersion predominantly in aqueous media, thus leading to an enhanced gloss of a typical coating.

BENEFITS & ADVANTAGES

Dynasylan® 4148 is a ready-for-use silane and is soluble in water and most organic solvents.

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 upon request from your local representative, customer service or from Evonik

Operations GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

PACKAGING

Dynasylan® 4148 is supplied in pails with a capacity of 25 kg, 200 drums and 1.000 kg IBC container.

STORAGE

The containers must remain tightly sealed during storage and kept in a well aired place. Protection against humidity is essential.

Protect from frost (avoid temperatures below 0 °C). The product becomes a solid when stored cold (e.g. at -10 °C) but can be recovered without deterioration after melting.

SHELF LIFE

In the unopened container Dynasylan® 4148 has a shelf life of min. 12 months from delivery.

Registration Listings	
Registry	**Status**
Australia (AIIC)	No
Canada (DSL)	Yes
China (IECSC)	Yes
EU (EINECS/ELINCS)	Yes
EU (REACH)	Exempted
Japan (ENCS)	No
South Korea (KECL)	Yes
Taiwan (TCSI)	Yes
USA (TSCA)	Yes

Disclaimer

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