

Product Information

Dynasylan® VTMOEO

Vinyltris(2-methoxyethoxy)silane

CAS NUMBER

1067-53-4

PRODUCT DESCRIPTION

Dynasylan® VTMOEO is a bifunctional organosilane possessing a reactive vinyl group and a hydrolyzable 2-methoxy-ethoxy-silyl group.

The dual nature of its reactivity allows Dynasylan® VTMOEO to bind chemically to both inorganic materials (e.g. glass, metals, fillers) and organic polymers (e.g. thermosets, thermoplastics, elastomers) thus functioning mainly as an efficient adhesion promoter and/or surface modifier.

Dynasylan® VTMOEO is a colorless, low-viscosity liquid with a typical aromatic odor.

Typical Properties

Property	Unit	Value
Appearance		colorless liquid
Boiling Point, min. (1013 hPa) DIN 51751	°C	285
Chemical Name		Vinyltris(2-methoxyethoxy)silane
Density (20 °C) DIN 51757	g/cm ³	~1.05
Flash Point, min. DIN EN ISO 2719	°C	115
Viscosity (20 °C) DIN 53015	mPa·s	~2.8

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

1. Adhesion promotion

Dynasylan® VTMOEO acts as an adhesion promoter for various mineral-filled polymers improving their mechanical

and electrical properties, especially after exposure to moisture.

Once bonded to an inorganic filler, Dynasylan® VTMOEO hydrophobises the filler surface. This effect improves the compatibility of fillers with the polymer matrix, leading to a better dispersibility, reduced melt viscosity and easier processing of filled plastics.

2. Dynasylan® VTMOEO as co-monomer for polymer dispersions

Polymer dispersions (e.g. styrene acrylics), modified with Dynasylan® VTMOEO show improved adhesion strength in wet conditions and wet scrub resistance.

3. Other applications

Dynasylan® VTMOEO can also be used as additive in organic coatings to improve adhesion on inorganic surfaces (metals, glass, ceramic surfaces), as well as for surface treatment of inorganic pigments.

BENEFITS & ADVANTAGES

In the presence of moisture, the methoxy-ethoxy groups of Dynasylan® VTMOEO hydrolyze to produce 2-methoxyethanol and reactive silanol (Si-OH) groups which can bond to a variety of inorganic substrates. The vinyl functional end of Dynasylan® VTMOEO can react with a suitable polymer (activated by peroxide or radiation).

HANDLING & PROCESSING

Toxicological and Environmental Aspects:

When exposed to moisture Dynasylan® VTMOEO liberates 2-methoxyethanol. This alcohol is suspected to be teratogenic meaning that is suspected to damage fertility or the unborn child. Evonik Industries AG offers a new generation of alternatives to vinyltris(2-methoxyethoxy)silane that do not liberate 2-methoxyethanol. In many applications these products perform even better than vinyltris(2-methoxy-ethoxy)-silane. More Information about these alternatives is given in the Product Information for

Dynasylan® 6490, Dynasylan® 6498 and Dynasylan® 6598.

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® VTMOEO is supplied in 25 kg containers, in 200 kg drums, or in 1.000 kg IBC one-way containers.

STORAGE

The containers must remain tightly sealed during storage and kept in a cool, well aired place. Product should be protected against humidity.

SHELF LIFE

In the unopened container the shelf life of Dynasylan® VTMOEO is min. 12 months from delivery.

Registration Listings

Registry	Status
Australia (AIIC)	Yes
Canada (DSL)	Yes
China (IECSC)	Yes
EU (REACH)	Yes
EU (EINECS/ELINCS)	Yes
Japan (ENCS)	Yes
South Korea (KECL)	Yes
Philippines (PICCS)	Yes
USA (TSCA)	Yes

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