

Product Information

Dynasylan® MTMS

Methyltrimethoxysilane

CAS NUMBER

1185-55-3

PRODUCT DESCRIPTION

Dynasylan® MTMS, an alkyltrialkoxysilane is an important component in sol-gel systems.

Dynasylan® MTMS is a colorless, low-viscosity liquid. Dynasylan® MTMS is regarded as trifunctional since all three alkoxy groups are able to hydrolyze. Additionally Dynasylan® MTMS contains a methyl group that adds organic character to the products. Hydrolysis leads to silanol groups which, in a subsequent condensation reaction, form very stable siloxane bonds (-Si-O-Si-). Condensation occurs parallel to hydrolysis once a certain amount of silanol groups have been formed. The absolute and relative rates of hydrolysis and condensation depend on a number of factors. The most important factors include pH, concentration, solvent, temperature and the catalyst.

Typical Properties

Property	Unit	Value
Appearance		colorless liquid
Boiling Point, min. (1.013 hPa) DIN 51751	°C	102
Density (25 °C) DIN 51757	g/cm ³	0.95
Flash Point, min. DIN EN ISO 13736	°C	11
Viscosity (25 °C) DIN 53015	mPa·s	0.5

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

Dynasylan® MTMS reacts faster with water than Dynasylan® MTES. In some sol-gel applications Dynasylan® MTMS is partially hydrolyzed to form a pre-product that can be further crosslinked using temperature.

This prehydrolysis often is done in conjunction with other organofunctional silanes (e.g. Dynasylan® GLYMO), silicic acid esters or even an aqueous silica sol. This preproduct can be modified even further by addition of organic resins or inorganic nanoparticles such as AEROSIL®.

BENEFITS & ADVANTAGES

It is also possible to construct an inorganic/organic network by adding silanes containing organofunctional groups (e.g. aminopropyl groups) and organic resins and polymerizing using standard organic methods. This principle makes it possible to obtain more resistant coatings having a higher UV-stability than traditional organic coatings. This can also lead to more flame resistant materials than using traditional resins.

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® MTMS are available in 25kg pails and 190 kg drums

STORAGE

Dynasylan® MTMS must be stored with exclusion of moisture.

SHELF LIFE

In originally sealed containers, Dynasylan® MTMS has a shelf life of min. 12 months from delivery.

Registration Listings

Registry	Status
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Australia (AIC)	Yes
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Canada (DSL)	Yes
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China (IECSC)	Yes
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EU (REACH)	Yes
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European Union (EINECS/ELINCS)	Yes
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Registration Listings

Registry	Status
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Japan (ENCS)	Yes
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South Korea (KECL)	Yes
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Philippines (PICCS)	Yes
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United States of America (TSCA)	Yes
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