

Dynasytan® GLYMO

3-Glycidyloxypropyltrimethoxysilane

Technical data

Properties and test methods	Value	Unit	Method
Boiling point (0.7 hPa / 0.5 torr)	90	°C	DIN 51356
Flash point	122	°C	DIN EN ISO 2719
Ignition temperature	400	°C	DIN 51794
Viscosity (20 °C)	3.65	mPa·s / cSt	DIN 53015
Density (20 °C)	approx. 1.07	g/cm ³	DIN 51757
Refractive index n(20, D)	approx. 1.429	-	DIN 51423

Registrations

Dynasytan® GLYMO

DSL/NDL (Canada):	Yes
PICCS (Philippines):	Yes
TSCA (USA):	Yes
IECSC (P.R. China):	Yes
ENCS (Japan):	Yes
ECL (South Korea):	Yes
EINECS/ELINCS (EU):	Yes
AICS (Australia):	Yes
REACH (Europe)	Registered

Dynasytan® GLYMO is a bifunctional organosilane possessing a reactive organic epoxide and hydrolyzable inorganic methoxysilyl groups.

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

Dynasytan® GLYMO is a colorless low-viscosity liquid with a slight terpentine-like odor. It is soluble in alcohols, ketones and aliphatic or aromatic hydrocarbons.

Safety and handling

Before considering the use of Dynasytan® 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.dynasytan.com or upon request from your local representative, customer service or from Evonik Resource Efficiency GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

Packaging, storage and shelf life

Dynasytan® GLYMO is supplied in 25 kg, 210 kg drums and 1.000 kg bulk containers.

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

Properties and applications

Dynasylan® GLYMO is an essential ingredient in the products of many industries. Examples are:

- glass fiber/glass fabric composites: as a finish or a size ingredient
- foundry resins: as an additive to polyurethane resins
- sealants and adhesives: as a primer or additive
- mineral filled composites: for pretreatment of fillers and pigments or as an additive to the polymer
- paints and coatings: as an additive and as a primer for improving adhesion to the substrate, especially glass and metal
- improved shelf life over aminosilanes in polyurethanes

Important product effects that can be achieved through the use of Dynasylan® GLYMO include:

- improved mechanical properties, such as flexural strength, tensile strength, impact strength and modulus of elasticity
- improved moisture and corrosion resistance
- improved electrical properties, for example dielectric constant, volume resistivity

Dynasylan® GLYMO can also improve such processing properties as

- filler dispersion
- rheological behavior (i.e. viscosity reduction) Newtonian behavior
- increased filler loading
- non yellowing

Reactivity

In the presence of water, the methoxy groups of Dynasylan® GLYMO hydrolyze to form reactive silanol groups which can bond to a variety of inorganic substrates. The organophilic glycidyl end of Dynasylan® GLYMO can react with a suitable polymer. Hydrolysis of Dynasylan® GLYMO can be catalyzed by organic acids such as acetic acid. Examples of suitable inorganic substrates are glass, glass fibers, quartz, cristobalite and metals.

Dynasylan® GLYMO may be used with such polymers as epoxy, phenolic, polyurethanes, PVAC, acrylates, polysulfides.

Processing

Dynasylan® GLYMO may be used as a constituent of an aqueous size, neat, or added to the polymer matrix as an additive. A chemical modification can be achieved by reaction with suitable functional monomers or polymers.

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

Europe/Middle-East/Africa/RoW
Evonik Resource Efficiency GmbH

Business Line Silanes
Rodenbacher Chaussee 4
63457 Hanau-Wolfgang
Germany
PHONE +49 6181 59 13636
FAX +49 6181 59 713915
dynasytan@evonik.com
www.dynasytan.com

Asia / Pacific

Evonik (SEA) Pte. Ltd.

Business Line Silanes
3 Internatioanl Business Park
#07-18, Nordic European Centre
Singapore 609927
PHONE +65 6809 6576
FAX +65 6809 6699
dynasytan@evonik.com
www.dynasytan.com

Asia / Pacific

Evonik Japan Co. Ltd

Business Line Silanes
12th Floor Monolith Building
2-3-1, Nishi-Shinjuku-ku
Tokyo 163-0912
Japan
PHONE +81 353 23 7446
FAX +81 353 23 7397
dynasytan@evonik.com
www.dynasytan.com

North America

Evonik Corporation

Business Line Silanes
299 Jefferson Road
Parsippany, NJ 07054-0677
USA
PHONE (TOLL FREE) +1 800 237 67 45
PHONE +1 973 929 8513
FAX +1 973 929 8503
dynasytan@evonik.com
www.dynasytan.com

Asia / Pacific

Evonik Specialty

Chemicals (Shanghai) Co. Ltd.

Business Line Silanes
55, Chungdong Road
Xinzhuang Industry Park
Shanghai 201108
P.R. China
PHONE +86 21 61191-399
FAX +86 21 61191-648
dynasytan@evonik.com
www.dynasytan.com

Asia / Pacific

Evonik India Pvt. Ltd.

Business Line Silanes
Krislon House
Saki Vihar Road, Anderi (E)
Mumbai - 400 072
India
PHONE +91 226 7238 809
FAX +91 226 7238 811
dynasytan@evonik.com
www.dynasytan.com

North America

Silbond Corporation

9901 Sand Creek Highway
Weston, MI 49289
USA
PHONE +1 517 436 9316
FAX +1 517 436 3148
dynasytan@evonik.com
www.dynasytan.com

Asia / Pacific

Evonik Korea Ltd.

Business Line Silanes
94, Galsan 1-dong
Bupyeong-gu
Incheon, 403-081
Korea
PHONE +82 2320 4773
FAX +82 2783 2520
dynasytan@evonik.com
www.dynasytan.com

Latin America

Evonik Brasil Ltda.

Business Line Silanes
Alameda Campinas, 579
01404-000 São Paulo-SP
Brazil
PHONE +55 11 3146 4123
FAX +55 11 3146 4148
dynasytan@evonik.com
www.dynasytan.com

Asia / Pacific

Evonik Taiwan Ltd.

Business Line Silanes
Artist Construction Bldg.
9F, No. 133
Min Sheng East Road, Sec 3
Taipei, 105 Taiwan, R.O.C.
Taiwan 10596
PHONE +886 227 17 1242
FAX +886 227 17 2106
dynasytan@evonik.com
www.dynasytan.com