

SAFETY DATA SHEET

Classified in accordance with 29 CFR 1910.1200

1. Identification

Product identifier: Dynasylan® VTMOEO

Chemical name:

Tris(2-methoxyethoxy)vinylsilane

Other means of identification

CAS Number: 1067-53-4

Recommended restrictions

Recommended use: For industrial use Coupling agent Crosslinking agents

Restrictions on use: Not determined.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation
299 Jefferson Road
Parsippany, NJ 07054
USA

Telephone : +1 973 929 8000

Fax : +1 973 929 8040

E-mail : product-regulatory-services@evonik.com

Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency 800 681 9531 (CHEMTREC MEXICO)
+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Toxic to reproduction

Category 1B

Label Elements

Hazard Symbol:



Signal Word:

Danger

Hazard Statement:

May damage fertility or the unborn child.

Precautionary Statements
Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC):

None.

3. Composition/information on ingredients
Chemical name:

Tris(2-methoxyethoxy)vinylsilane

Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
Tris(2-methoxyethoxy)vinylsilane		1067-53-4	>=90 - <=100%

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition information of impurities and stabilizers

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
2-methoxyethanol		109-86-4	>=0.1 - <1%

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures
Description of necessary first-aid measures
General information:

Observe self-protection Remove contaminated or saturated clothing immediately and dispose of safely.

Inhalation:

If aerosol or mists are formed: Move to fresh air. Do not leave the victim unattended. Keep patient warm and at rest. Call a physician immediately.

Skin Contact:

Wash off immediately with plenty of water. In case of complaints: Consult doctor immediately.

Eye contact: Rinse thoroughly with plenty of water keeping eyelid open. In case of persistent discomfort: Consult an ophthalmologist.

Ingestion: Call a physician immediately. Only when patient fully conscious: Have the mouth rinsed with water. Do not leave the victim unattended. Keep patient warm and at rest. Place person on side in stable position if unconscious.

Personal Protection for First-aid Responders: As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

Most important symptoms/effects, acute and delayed

Symptoms: None known.

Hazards: None known.

Indication of immediate medical attention and special treatment needed

Treatment: After absorbing large amounts of substance: Gastric lavage, administration of activated charcoal, acceleration of gastrointestinal passage.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Alcohol resistant foam. Water spray. Carbon Dioxide. dry powder

Unsuitable extinguishing media: High volume water jet.

Specific hazards arising from the chemical: Standard procedure for chemical fires.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters: As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Use personal protective equipment.

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Methods and material for containment and cleaning up: Soak up with absorbent material, e.g., sand, silica gel, acid binder, universal binder or sawdust. Place in a marked, sealable container and dispose of in accordance with existing federal, provincial, state and local regulations.

Environmental Precautions: Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation): Ensure good ventilation during processing.

Safe handling advice: Use with adequate ventilation.

Contact avoidance measures: No data available.

Hygiene measures: Avoid contact with skin, eyes and clothing. Do not inhale vapors or aerosols. Do not eat, drink, or smoke when using the product. Remove contaminated or saturated clothing.

Storage

Safe storage conditions: Normal measures for preventive fire protection. Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture.

Safe packaging materials: No data available.

Storage Temperature: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
2-methoxyethanol	TWA	0.1 ppm	US. ACGIH Threshold Limit Values, as amended (03 2016)
	REL	0.1 ppm 0.3 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	PEL	25 ppm 80 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (03 2016)

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

Hazardous components without workplace control parameters

Appropriate Engineering Controls Ensure good ventilation during processing.

Individual protection measures, such as personal protective equipment

Eye/face protection: Use chemical splash goggles or face shield.

Skin Protection**Hand Protection:**

Material: Butyl rubber.
Break-through time: >= 480 min
Material: Polychloroprene (PCP)
Break-through time: >= 240 min
Additional Information: The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use., Selection of protective gloves to meet the requirements of specific workplaces., Suitability for specific workplaces should be clarified with protective glove manufacturers., Use impermeable gloves.

Skin and Body Protection:

A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

Respiratory Protection:

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

9. Physical and chemical properties**Appearance**

Physical state:	liquid
Form:	liquid
Color:	Colorless
Odor:	No data available.
Odor Threshold:	Not determined.
pH:	Not determined.
Freezing point:	-130 °C
Boiling Point:	108 °C (2.7 hPa) (DIN 51 356) 285 °C (1,013 hPa) (DIN 51751) literature
Flash Point:	115 °C (DIN EN ISO 2719 (Pensky-Martens, Closed Cup))
Evaporation Rate:	Not determined.
Flammability (solid, gas):	No data available.
Explosive limit - upper:	Not determined.
Explosive limit - lower:	Not determined.
Vapor pressure:	0.43 Pa (25 °C)
Vapor density (air=1):	No data available.
Density:	1.05 g/cm ³ (20 °C) (DIN 51757)
Relative density:	No data available.
Solubility in Water:	not miscible decomposition by hydrolysis
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not determined.
Self Ignition Temperature:	No data available.

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Decomposition Temperature:	Not determined.
Kinematic viscosity:	No data available.
Dynamic viscosity:	2.8 mPa.s (20 °C, DIN 53 015)
Other information	
Explosive properties:	not explosive
Oxidizing properties:	No data available.
Minimum ignition temperature:	210 °C (1,013 hPa, DIN 51 794)

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Reacts with: Peroxides.
Conditions to avoid:	Protect from moisture.
Incompatible Materials:	Water. peroxide
Hazardous Decomposition Products:	2-methoxyethanol

11. Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral	
Product:	LD 50 (Rat): > 2,000 mg/kg
Dermal	
Product:	LD 50 (Rat): > 2,000 mg/kg

Inhalation**Product:** No data available.**Repeated dose toxicity****Product:** NOAEL (Rat(male), Oral): 25 mg/kg
NOAEC (Rat, Inhalation - vapor, 5 days/weeks, 6 hours/day): 10 ppm
NOAEL (Rat(female)): 75 mg/kg**Skin Corrosion/Irritation****Product:** Not irritating OECD 404 (Rabbit): Not irritating**Serious Eye Damage/Eye Irritation****Product:** Not irritating Rabbit: Not irritating**Respiratory or Skin Sensitization****Product:** Buehler Test, OECD 406 (Guinea Pig): Not a skin sensitizer.**Carcinogenicity****Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity**In vitro****Product:** Ames test (OECD 471): negative
gene mutation test (OECD 476): negative
Chromosomal aberration (OECD 473): negative**In vivo****Product:** No data available.**Components:**

2-methoxyethanol Chromosomal aberration (OECD 475) Oral (Mouse): negative

Reproductive toxicity**Product:** May cause adverse reproductive effects - such as infertility based on animal data.**Specific Target Organ Toxicity - Single Exposure****Product:** no evidence for hazardous properties**Specific Target Organ Toxicity - Repeated Exposure****Product:** no evidence for hazardous properties**Aspiration Hazard****Product:** No evidence of aspiration toxicity

Other effects: Hydrolysis product, 2-methoxyethanol, may impair fertility. May cause harm to unborn child. Possible adverse effects on the progeny cannot be excluded, even if the TLV is observed.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC0 (Brachydanio rerio (zebrafish), 96 h): ≥ 100 mg/l

Aquatic Invertebrates

Product: EC 50 (Daphnia magna, 48 h): 314 mg/l

Toxicity to Aquatic Plants

Product: EC 50 (Desmodesmus subspicatus (green algae), 72 h): 304 mg/l (EC 88/302)

Specified substance(s):

Tris(2-methoxyethoxy)vinylsilane EC 50 (Desmodesmus subspicatus (green algae), 72 h): 304 mg/l (EC 88/302)

2-methoxyethanol EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): 25,500 mg/l (ISO 8692) growth rate

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: NOEC (Desmodesmus subspicatus (green algae), 72 h): 75 mg/l (EC 88/302)

Specified substance(s):

Tris(2-methoxyethoxy)vinylsilane NOEC (Desmodesmus subspicatus (green algae), 72 h): 75 mg/l (EC 88/302)

2-methoxyethanol No data available.

Persistence and Degradability

Biodegradation

Product: 89 %

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Product name: Dynasylan® VTMOEO

Bioconcentration Factor (BCF)

Product: low

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: Not determined.

Mobility in soil: Adsorption on the floor: low.**Other adverse effects:** The data we have at our disposal do not necessitate identification concerning environmental hazard.**13. Disposal considerations****Disposal methods:** Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method.**Contaminated Packaging:** Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities. If there is product residue in the emptied container, follow directions for handling on the container's label. Incorrect disposal or reuse of this container is illegal and can be dangerous. Other countries: observe the national regulations.**14. Transport information****Domestic regulation****49 CFR**

Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations.

International Regulations**UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information**US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)**Chemical Identity**

2-methoxyethanol Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity

GLYCOL ETHERS

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Reproductive toxicity

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65



WARNING: This product can expose you to chemicals including, 2-methoxyethanol which is [are] known to the State of California to cause birth defects or other reproductive harm.

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

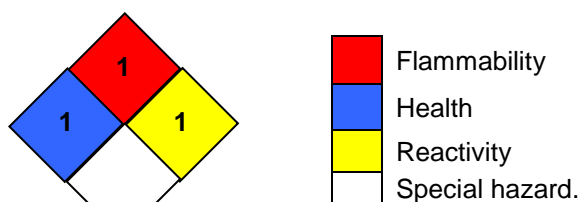
16. Other information, including date of preparation or last revision

HMIS Hazard ID

Health	2*
Flammability	1
Physical Hazards	1
PERSONAL PROTECTION	

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 08/07/2020

Version #: 1.0

Further Information: No data available.

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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