

# SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

## 1. Identification

**Product identifier:** Dynasylan® CPTMO

**Chemical name:**  
3-Chloropropyltrimethoxysilane

**Other means of identification**  
**CAS Number:** 2530-87-2

### Recommended restrictions

**Recommended use:** For industrial use Surface modifier Raw material  
**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 : +1 800 681 9531 (CHEMTREC MEXICO)  
+1 703 527 3887 (CHEMTREC WORLD)

## 2. Hazard(s) identification

### Hazard Classification

#### Physical Hazards

Flammable liquids Category 4

### Label Elements

**Hazard Symbol:** No symbol

**Signal Word:** Warning

**Hazard Statement:** Combustible liquid.

#### Precautionary Statements

**Prevention:** Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear

protective gloves/eye protection/face protection.

**Response:** In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/ container to an approved waste disposal plant.

**Hazard(s) not otherwise classified (HNOC):** None.

### 3. Composition/information on ingredients

**Chemical name:**

3-Chloropropyltrimethoxysilane

**Substances**

Chemical Identity	CAS number	Content in percent (%)*
3-Chloropropyltrimethoxysilane	2530-87-2	>=60 - <=100%

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

A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

**Description of necessary first-aid measures**

**General information:** Remove contaminated or saturated clothing immediately and follow safe disposal procedures.

**Inhalation:** If aerosol or mists are inhaled, take affected persons out into the fresh air. In case of persistent discomfort or other symptoms, consult a physician immediately.

**Skin Contact:** Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Obtain medical attention immediately if symptoms occur. Wash clothing before reuse.

**Eye contact:** Keeping eyelid open, immediately rinse thoroughly for at least 5 minutes using plenty of water or, if necessary, eye rinsing solution. In case of persistent discomfort: Consult an ophthalmologist.

**Ingestion:** If substance is accidentally swallowed, do not induce vomiting. If fully conscious, have patient rinse mouth with plenty of water and drink plenty of water in small sips. If unconscious, ensure person is in a stable position. Never give anything by mouth to an unconscious person. Obtain immediate medical attention.

**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:** If large amount of substance is absorbed, liberation of reaction product (methanol) can lead to symptoms of poisoning. Possible signs of poisoning include daze, dizziness, nausea, colicky abdominal pain or respiratory disturbance. Symptoms of increasing intoxication include dysopia or loss of eyesight. Treatment may include immediate gastric lavage, antidote treatment or correction of acid-base balance. Detection of the substance (methanol) is possible in blood. Evidence shows that the treatment of methanol absorption is enhanced through the administration of ethanol, which should be given to produce a blood level of at least 0.1%. Ethanol diminishes the production of toxic metabolites of methanol. Obtain treatment of allergic reaction if necessary.

**Hazards:** No data available.

#### Indication of immediate medical attention and special treatment needed

**Treatment:** No data available.

### 5. Fire-fighting measures

#### Suitable (and unsuitable) extinguishing media

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

**Unsuitable extinguishing media:** High volume water jet

**Specific hazards arising from the chemical:** Hazardous fumes in fires, specific to the product: Hydrogen chloride. Combustible liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

#### 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.

**Accidental release measures:** Remove sources of ignition and ventilate area. Run off may create fire or explosion hazard in sewer. Assure sufficient ventilation.

**Methods and material for containment and cleaning up:** Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

**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. see section 7.

**Safe handling advice:** Keep away from heat, sparks, flames and other sources of ignition. Keep container tightly closed. Use only with adequate ventilation.  
 Vapors may spread long distances and travel to areas away from the work site before igniting or flashing back to the vapor source.  
 Wear personal protective equipment; see section 8.

**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:** Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture. Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container. This material may have a low electrical conductivity and therefore may accumulate dangerous levels of static electricity. An ignitable vapor-air mixture can form inside storage tanks.

The user must be sure to dissipate static charge by careful bonding and grounding of all equipment and personnel involved in fluid transfer with continuity checks to prove effectiveness. Additional precautions against fire and explosion are the use of inert gas to purge vapor space; dip-pipes while filling vessels, especially lined vessels; grounded tank level floats; reduced flow velocity; self-closing valves on transfer lines and flame arrestors in vent lines.

Additional guidance on fire and explosion protection may be found in various consensus standards, including NFPA 30, 69 and 77 and API 2003 as well as OSHA regulation 29CFR1910.106.

Follow all SDS/label precautions even after container is emptied because it may retain product residues.

**Safe packaging materials:** No data available.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
methanol	TWA	200 ppm	US. ACGIH Threshold Limit Values (03 2016)
	STEL	250 ppm	US. ACGIH Threshold Limit Values (03 2016)
	STEL	250 ppm 325 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	200 ppm 260 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	200 ppm 260 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)

#### Exposure guidelines

methanol	US. ACGIH Threshold Limit Values	Can be absorbed through the skin.
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**Appropriate Engineering Controls** Ensure good ventilation during processing. see section 7.

### 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:  $\geq 480$  min  
 Material: Fluorinated rubber (Viton)  
 Break-through time:  $\geq 480$  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.

**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.

<b>9. Physical and chemical properties</b>
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**Appearance**

<b>Physical state:</b>	liquid
<b>Form:</b>	Clear Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	No data available.
<b>Odor Threshold:</b>	not determined
<b>pH:</b>	not determined
<b>Freezing point:</b>	-134 °C
<b>Boiling Point:</b>	195 °C (1,013 hPa) (DIN 51 751)
<b>Flash Point:</b>	84 °C (DIN EN ISO 2719 (Pensky-Martens, Closed Cup))
<b>Evaporation Rate:</b>	not determined
<b>Flammability (solid, gas):</b>	No data available.

<b>Explosive limit - upper (%):</b>	44 %(V) (literature value)
<b>Explosive limit - lower (%):</b>	5.5 %(V) (literature value)
<b>Vapor pressure:</b>	52 Pa (20 °C)
<b>Vapor density (air=1):</b>	No data available.
<b>Density:</b>	1.08 g/cm <sup>3</sup> (25 °C) (DIN 51757)
<b>Relative density:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	not miscible
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	2.0
<b>Self Ignition Temperature:</b>	No data available.

**Decomposition Temperature:** < 150 °C (literature value)  
**Kinematic viscosity:** No data available.  
**Dynamic viscosity:** 1.5 mPa.s (20 °C, DIN 53 015)

**Other information**

**Explosive properties:** Vapors can form explosive mixtures with air.  
**Oxidizing properties:** No data available.  
**Minimum ignition temperature:** 220 °C  
**Metal Corrosion:** No data available.

**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:** No dangerous reactions known.  
**Conditions to avoid:** Keep away from heat and sources of ignition. Protect from moisture. Hydrolyses on contact with water.  
**Incompatible Materials:** Water.  
**Hazardous Decomposition Products:** Methanol in case of hydrolysis. Alcohol formed by hydrolysis lowers the flash point of the product.

**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:** Possibly harmful.  
**Dermal Product:** LD 50 (Rat): > 2,000 mg/kg  
**Inhalation Product:** No data available.

**Repeated dose toxicity****Product:** NOAEC (Rat, Inhalation - vapor, 5 days/weeks, 6 hours/day): 813 mg/m<sup>3</sup>**Skin Corrosion/Irritation****Product:** Not irritating OECD Test Guideline 404 (Rabbit): Not irritating**Serious Eye Damage/Eye Irritation****Product:** Not irritating Rabbit: Not irritating**Respiratory or Skin Sensitization****Product:** Buehler Test, OECD Test Guideline 406 (Guinea Pig): Not a skin sensitizer.**Carcinogenicity****Product:** Contains no carcinogenic substances as defined by NTP, IARC and/or OSHA.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:****US. National Toxicology Program (NTP) Report on Carcinogens:****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):****Germ Cell Mutagenicity****In vitro****Product:** No data available.**In vivo****Product:** Chromosomal aberration (OECD TG 474) Intraperitoneal (Mouse): negative  
Chromosomal aberration (OECD TG 413) Inhalative (Rat): negative**Reproductive toxicity****Product:** No data available.**Components:**3-  
Chloropropyltrimethoxysil  
ane  
Not classified**Specific Target Organ Toxicity - Single Exposure****Product:** Not classified**Specific Target Organ Toxicity - Repeated Exposure****Product:** Not classified**Aspiration Hazard****Product:** No evidence of aspiration toxicity**Other effects:** No data available.

**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** LC 50 (Brachydanio rerio (zebrafish), 96 h): > 100 mg/l**Aquatic Invertebrates****Product:** EC 50 (Daphnia magna (Water flea), 48 h): 869 mg/l**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Toxicity to Aquatic Plants****Product:** EC 50 (Desmodesmus subspicatus (green algae), 72 h): > 833 mg/l  
NOEC (Desmodesmus subspicatus (green algae), 72 h): 167 mg/l**Persistence and Degradability****Biodegradation****Product:** 84 %**BOD/COD Ratio****Product:** No data available.**Bioaccumulative potential****Bioconcentration Factor (BCF)****Product:** not bioaccumulative**Partition Coefficient n-octanol / water (log Kow)****Product:** Log Kow: 2.0 20 °C**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:**

No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer. The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority. Waste must be disposed of in accordance with federal, provincial, state and local regulations. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH AN ELECTRIC OR GAS TORCH.



**Contaminated Packaging:** Packaging, that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations. 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

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.  
(3-chloropropyltrimethoxysilane)

Class : CBL

Packing group : III

Labels : NONE

ERG Code : 128

Marine pollutant : no

Remarks : Not regulated in packages 450 liter or less.

##### International Regulations

###### UNRTDG

Not regulated as a dangerous good

###### IATA-DGR

Not regulated as a dangerous good

Remarks : Not hazardous freight in air traffic (ICAO-TI / IATA-DGR).

###### IMDG-Code

Not regulated as a dangerous good

Remarks : For USA only; packaging size more than 450 l:  
COMBUSTIBLE LIQUID, N.O.S. (3-Chloropropyltrimethoxysilane), NA 1993, III, flash point 84°C  
Not classified as hazardous sea cargo (IMDG code)

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

Not applicable for product as supplied.

##### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### 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)**

None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
methanol	5000 lbs.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories**

Flammable (gases, aerosols, liquids, or solids)

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances****SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
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**SARA 313 (TRI Reporting)**

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, methanol, which is [are] known to the State of California to cause birth defects or other reproductive harm.For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**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.

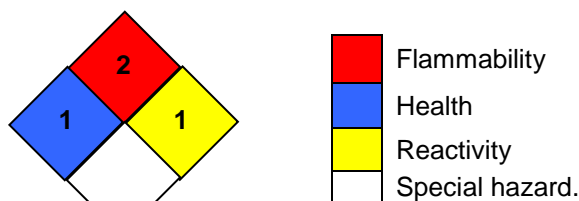
**US. Rhode Island RTK**

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

**16. Other information, including date of preparation or last revision**
**HMIS Hazard ID**

<b>Health</b>	1
<b>Flammability</b>	2
<b>Physical Hazards</b>	1
<b>PERSONAL PROTECTION</b>	

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:** 06/20/2019

**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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