

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: HazCom 2012

9483

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Revision Number 31

1. Identification**Product identifier****Product Name** 9483**Other means of identification****Recommended use of the chemical and restrictions on use****Recommended use** Adhesives.**Restrictions on use** No information available.**Details of the supplier of the safety data sheet****Manufacturer**Dymax Corporation
318 Industrial Lane
Torrington, CT 06790
Tel: 860-482-1010
Fax: 860-496-0608**E-mail address** Product_Regulatory@dymax.com**Emergency telephone number****24 Hour Emergency Phone Number** Chemtrec 1-800-424-9300**2. Hazard(s) identification****Emergency Overview****Appearance** transparent **Physical state** Liquid **Odor** Characteristic**Classification**

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

Hazards not otherwise classified (HNOC)

Not applicable.

Label elements**Signal word** Warning**Hazard statements**

Causes skin irritation.
 Causes serious eye irritation.
 May cause an allergic skin reaction.
 Suspected of damaging fertility or the unborn child.
 May cause respiratory irritation.



Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Wash face, hands and any exposed skin thoroughly after handling.
 Avoid breathing dust/fume/gas/mist/vapors/spray.
 Use only outdoors or in a well-ventilated area.

Precautionary Statements - Response

Get medical advice/attention if you feel unwell.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF ON SKIN: Wash with plenty of soap and water.
 Take off contaminated clothing and wash before reuse.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Precautionary Statements - Storage

Store locked up.
 Store in a well-ventilated place. Keep container tightly closed.
 Protect from moisture.

Precautionary Statements - Disposal

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

Other information

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

Environmental product testing for acute and chronic aquatic effects determined classification to be Category 3. OECD Test No. 202: Daphnia sp., Acute Immobilization Test.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Trade secret	Weight-%
2-Propenoic acid, 2-hydroxyethyl ester, reaction products with 1,6-diisocyanatohexane trimer	162492-01-5	*	40-69
Acrylate Ester	Proprietary	*	25-39
Phosphoric acid, 1,3-phenylene tetraphenyl ester	57583-54-7	*	5-9

2-Propenoic acid isodecyl ester	1330-61-6	*	5-9
Photoinitiator	Proprietary	*	1-<3
Visible Photoinitiator	Proprietary	*	1-<3
Photoinitiator	Proprietary	*	1-<3
Silane Coupling Agent	Proprietary	*	1-<3
Vinyltrimethoxysilane	2768-02-7	*	<1

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

Ingestion

Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Inhalation

Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.

Skin contact

May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

Self-protection of the first aider

Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians

May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical or CO2.

Unsuitable extinguishing media

Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Product is or contains a sensitizer. May cause sensitization by skin contact.

Hazardous combustion products

Carbon dioxide (CO₂). Carbon monoxide. Hydrocarbons. Nitrogen oxides (NO_x).

Explosion data

Sensitivity to mechanical impact: None.
Sensitivity to static discharge: None.

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information

Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: Handling and storage, including how the chemical may be safely used**Precautions for safe handling****Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Protect from light.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Protect from light.
Protect from moisture.

8. Exposure controls/personal protection**Control parameters****Exposure Limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls**Engineering controls**

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment**General hygiene considerations**

Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

Hand protection

Wear suitable gloves. Nitrile rubber, Butyl rubber.

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls

Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state:	Liquid
Appearance:	transparent
Color:	light yellow
Odor:	Characteristic
Odor threshold:	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH:	No data available	No information available
pH (as aqueous solution):	No data available	Not applicable
Melting point / freezing point:	No data available	
Boiling point / boiling range:	No data available	No information available
Flash point:	101 °C / 214 °F	Pensky-Martens Closed Cup (PMCC)
Evaporation rate:	No data available	No information available
Flammability (solid, gas):	No data available	Not applicable
Flammability Limit in Air		
Upper flammability or explosive limits:	No data available	No information available
Lower flammability or explosive limits:	No data available	No information available
Vapor pressure:	No data available	No information available
Relative vapor density:	No data available	No information available
Relative density:	No data available	No information available
Water solubility:	partially soluble	
Solubility(ies):	No data available	No information available
Partition coefficient:	No data available	No information available
Autoignition temperature:	335 °C / 635 °F	No information available

Decomposition temperature:	No data available	No information available
Kinematic viscosity:	No data available	No information available
Dynamic viscosity:	600 cP	
Other information		

Explosive properties:	No information available
Oxidizing properties:	No information available
Softening point:	No information available
Molecular weight:	No information available
VOC Content (%):	No information available
Liquid Density:	No information available
Bulk density:	No information available

10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

Protect from light. Heat, flames and sparks.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products

None under normal use conditions.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation:

Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.

Eye contact:

Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact:

May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.

Ingestion:

Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral): 10,315.40 mg/kg
 ATEmix (dermal): 2,963.00 mg/kg

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

Component Information:

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2-Propenoic acid, 2-hydroxyethyl ester, reaction products with 1,6-diisocyanatohexane trimer	>5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Acrylate Ester	= 4890 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
Phosphoric acid, 1,3-phenylene tetraphenyl ester	> 5 g/kg (Rat)	> 2000 mg/kg (Rat)	-
2-Propenoic acid isodecyl ester	= 12 g/kg (Rat)	= 3540 mg/kg (Rabbit)	-
Photoinitiator	= 1694 mg/kg (Rat)	= 6929 mg/kg (Rat)	-
Visible Photoinitiator	-	> 2000 mg/kg (Rat)	-
Photoinitiator	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 10.6 mg/L (Rat) 4 h
Silane Coupling Agent	= 23.5 g/kg (Rat)	> 2000 mg/kg (Rat)	> 2.28 mg/L (Rat) 6 h
Vinyltrimethoxysilane	= 7340 µL/kg (Rat)	= 3.54 mL/kg (Rabbit)	= 16.8 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation: Classification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation: Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization: May cause sensitization by skin contact.

Germ cell mutagenicity: Not classified. Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.

STOT - single exposure: May cause respiratory irritation.

STOT - repeated exposure: Not classified. Based on available data, the classification criteria are not met.

Aspiration hazard: Not classified. Based on available data, the classification criteria are not met.

12. Ecological information**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

Product Information

Environmental product testing for acute and chronic aquatic effects determined classification to be Category 3. OECD Test No. 202: Daphnia sp., Acute Immobilization Test.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2-Propenoic acid, 2-hydroxyethyl ester, reaction products with 1,6-diisocyanatohexane trimer	ErC 50 > 100 mg/L 72 h (Scenedesmus Subspicatus)	LC50 > 100 mg/L 96 h (Danio rerio)	-	EC50 = 58 mg/L 48 h (Daphnia magna)
Acrylate Ester	ErC 50 = 2.7 mg/L 96 h (Pseudokirchneriella subcapitata)	LC50: =0.704mg/L (96h, Danio rerio)	-	EC 50 = 1.1 mg/L 48 h (Daphnia magna)
Visible Photoinitiator	-	LC50 10 mg/l 48 h (Oryzias latipes)	-	-
Silane Coupling Agent	EC50 > 536,00 mg/l 72 h (Scenedesmus subspicatus)	LC50: >100mg/L (96h Danio rerio)	-	EC50 > 876,00 mg/l 48 h (Daphnia magna)
Vinyltrimethoxysilane	-	LC50: =191mg/L (96h, Oncorhynchus mykiss)	-	-

Persistence and degradability

No information available.

Bioaccumulation

There is no data for this product.

Component Information

Chemical name	Partition coefficient
Acrylate Ester	4.52
Photoinitiator	2.5
Silane Coupling Agent	2.1

Other adverse effects

No information available.

13. Disposal considerations**Waste treatment methods****Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of contents/containers in accordance with local regulations.

US EPA Waste Number: U154 U239

14. Transport information**IMDG** Not regulated**IATA** Not regulated**DOT** Not regulated**15. Regulatory information**

International Inventories**TSCA** Complies

**Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements*

AIIC	Low Volume Exemption (LVE)
DSL/NDSL	Listed on NDSL
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Not Listed
NZIoC	Not Listed
TCSI	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

AIICS - Australian Industrial Chemicals Introduction Scheme

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

TCSI - Taiwan Chemical Substance Inventory

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



WARNING

Chemical name	California Proposition 65
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Methanol	Developmental
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U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
2,4-Pentanedione	X	X	X
Hexamethylene diisocyanate	X	X	-
Methanol	X	X	X
Xylene	X	X	X

U.S. EPA Label Information**EPA Pesticide Registration Number**

Not applicable

16. Other information

NFPA **Health hazards** 2 **Flammability** 1 **Instability** 0 **Special hazards** -
HMIS **Health hazards** 2 * **Flammability** 1 **Physical hazards** 0 **Personal protection** X
Chronic Hazard Star Legend: * = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA (time-weighted average)	STEL (Short Term Exposure Limit)
Ceiling: Maximum limit value	*: Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

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Revision Note The symbol (*) in the margin of this SDS indicates that this line has been revised

Disclaimer

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of Dymax Corporation and its subsidiaries and affiliates (DYMAX). The information in this SDS relates only to

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the specific material designated herein. DYMAX assumes no legal responsibility for use of or reliance upon the information in this SDS.

End of Safety Data Sheet