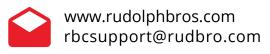


1-800-375-0605 Option 8 for 24/7 Service





Oligomers . Adhesives . Coatings . Dispensing . Light-Curing Systems

Safety Data Sheet

according to HazCom 2012

SDS #: 9481-E

9481-E

Issue Date 2019-03-14 Revision Date 2019-03-14 Version 4.02

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name 9481-E

Other means of identification

Product Code 9481-E

Synonyms Not applicable

Recommended use of the chemical and restrictions on use

Identified uses Adhesives.

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address Dymax Corporation

318 Industrial Lane Torrington, CT 06790 Tel: 860-482-1010 Fax: 860-496-0608

Information department: North American Safety Department @ 1-860-482-1010

Emergency Telephone North America: Chemtrec @ 1-800-424-9300 (24hrs)

2. HAZARDS IDENTIFICATION

Emergency Overview

Physical stateliquidColorlight amberOdorCharacteristicAppearancetransparent

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

Target Organ Effects

Blood, Peripheral Nervous System (PNS).

GHS Label elements, including precautionary statements

Issue Date 2019-03-14 Revision Date 2019-03-14 Version 4.02



Signal word Danger

Hazard statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H360 - May damage fertility or the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood Wash face, hands and any exposed skin thoroughly after handling

Do not breathe dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water

Take off contaminated clothing and wash before reuse

If skin irritation or rash occurs: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

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

Other Information

Testing for acute and chronic aquatic effects determined no environmental classification is required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Chemical Name	CAS No.	Weight-%	Trade Secret	Classification (Reg. 1272/2008)
Urethane Acrylate Resin	Proprietary	40-69	*	Skin Irrit. 3 (H316)
				Skin Sens. 1B (H317)
				Aquatic Acute 3 (H402)
				Aquatic Chronic 3 (H412)
Isobornyl Acrylate	5888-33-5	25-39	*	Skin Irrit. 2 (H315)
				Eye Irrit. 2A (H319)
				Skin Sens. 1 (H317)
				STOT SE 3 (H335)
				Aquatic Chronic 1 (H411)
Tetrahydrofurfuryl methacrylate	2455-24-5	10-24	*	Flam. Liq. 4 (H227)
				Skin Sens. 1 (H317)
				Repr. 1B (H360)
				Aquatic Chronic 3 (H412)





9481-E

Issue Date 2019-03-14 Revision Date 2019-03-14 Version 4.02

Photoinitiator	Proprietary	1-3	*	Acute Tox. 4 (H302) Aquatic Chronic 2 (H411)
Phenol, isopropylated, phosphate	68937-41-7	1-3	*	STOT RE 2 (H373) Repr. 2 (H361fd) Aquatic Chronic 2 (H411)
Visible Photoinitiator	Proprietary	1-3	*	Repr. 2 (H361f) Aquatic Chronic 2 (H411)
Photoinitator	Proprietary	1-3	*	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) STOT SE 3 (H335)
Silane Coupling Agent	Proprietary	1-3	*	Skin Sens. 1 (H317)

Remaining ingredients are not considered hazardous in accordance with the Globally Harmonized System (GHS)

4. FIRST AID MEASURES

First aid measures

General advice

IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Eye contact

Flush eyes with water for at least 15 minutes. Get medical attention if eye irritation develops or persists.

Skin Contact

Wash off immediately with plenty of water, Get medical attention if irritation develops and persists.

Inhalation

Remove to fresh air, If symptoms persist, call a physician.

Ingestion

If swallowed, Rinse mouth, Get medical attention.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

Main Symptoms

No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use CO2, dry chemical, or foam.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.







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

9481-E

Issue Date 2019-03-14 Revision Date 2019-03-14 Version 4.02

Hazardous combustion products

Hazardous decomposition products due to incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, Wear protective gloves/clothing and eye/face protection.

Environmental precautions

Environmental precautions

Do not allow material to contaminate ground water system, Try to prevent the material from entering drains or water courses, See Section 12 for additional Ecological Information, Local authorities should be advised if significant spillages cannot be contained.

Other Information

See Section 12 for additional Ecological Information.

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).

7. HANDLING AND STORAGE

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

Technical measures and storage conditions

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

Incompatible products

Amines, Strong oxidizing agents, Strong acids, Strong bases, Oxygen scavengers, Thiosulfates.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

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







Issue Date 2019-03-14 Revision Date 2019-03-14 Version 4.02

Appropriate engineering controls

Engineering Measures

Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety glasses with side-shields If splashes are likely to occur, wear: Goggles

Skin and body protection

Wear protective gloves and protective 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, Do not breathe vapors, mist or gas.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice, When using do not eat, drink or smoke, Wear suitable gloves and eye/face protection, Wash hands before breaks and at the end of workday, Contaminated work clothing should not be allowed out of the workplace, Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid		
Appearance	transparent	Odor	Characteristic
Color	light amher	Odor throshold	No information

No information available light amber Odor threshold

Property_	<u>Values</u>	Remarks / • Method
pH		No information available
Melting point / freezing point		No information available
Boiling point / boiling range		No information available
Flash point	108 °C / 226 °F	
Evaporation rate		No information available

Flammability (solid, gas) No information available Flammability Limit in Air Upper flammability limit

Lower flammability limit Vapor pressure No information available No information available Vapor density No information available

Specific Gravity Practically insoluble Water Solubility

Solubility in other solvents No information available

No information available Partition coefficient: n-octanol/water Autoignition temperature No information available **Decomposition temperature** No information available

Dynamic viscosity 125 cP Kinematic viscosity No information available

Explosive properties No information available Oxidizing properties No information available

Other Information

No information available Softening point No information available Molecular weight VOC Content (%) No information available







Issue Date 2019-03-14 Revision Date 2019-03-14 Version 4.02

Density No information available No information available **Bulk density**

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Protect from light. Heat, flames and sparks.

Incompatible materials

Amines, Strong oxidizing agents, Strong acids, Strong bases, Oxygen scavengers.

Hazardous Decomposition Products

No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Information on likely routes of exposure

Inhalation There is no data for this product There is no data for this product Eye contact **Skin Contact** There is no data for this product Ingestion There is no data for this product

No information available. **Symptoms**

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

May cause sensitization of susceptible persons. Sensitization

No information available. **Mutagenic effects** Reproductive toxicity No information available.

Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

STOT - single exposure

Target Organ Effects Blood, Peripheral Nervous System (PNS).

No information available. **Aspiration hazard** Other adverse effects No information available.

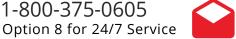
Chronic toxicity Repeated contact may cause allergic reactions in very susceptible persons

1-800-375-0605

Avoid repeated exposure







9481-E

Issue Date 2019-03-14 Revision Date 2019-03-14 Version 4.02

Contains a known or suspected reproductive toxin

Numerical measures of toxicity - Product Information

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

ATEmix (oral) 16433 mg/kg ATEmix (dermal) 15959 mg/kg ATEmix (inhalation-dust/mist) 25.2 mg/l ATEmix (inhalation-vapor) 10000 mg/l

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Urethane Acrylate Resin	>5000 mg/kg (Rat)		
Isobornyl Acrylate	= 4890 mg/kg (Rat)	> 5 g/kg (Rabbit)	
Tetrahydrofurfuryl methacrylate	LD50 4033 mg/kg (Rat)		
Photoinitiator	= 1694 mg/kg (Rat)		
Phenol, isopropylated, phosphate	> 5000 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	> 200 mg/L (Rat)1 h
Photoinitator	5000 mg/kg (Rat)	> 1160 mg/kg (Rat)	10.6 mg/L (Rat) 4 h
Silane Coupling Agent	> 5000 mg/kg (Rat)		

12. ECOLOGICAL INFORMATION

Ecotoxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Acute aquatic toxicity

Product Information

Testing for acute and chronic aquatic effects determined no environmental classification is required.

Component Information

Chemical Name	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to algae
Urethane Acrylate Resin	LC50 > 100 mg/L 96 h	EC50 = 58 mg/L 48 h	ErC 50 > 100 mg/L 72 h
	(Danio rerio)	(Daphnia magna)	(Scenedesmus Subspicatus)
Isobornyl Acrylate	LC50 = 1.8 mg/L 96 h	EC 50 = 1.1 mg/L 48 h	ErC 50 = 2.7 mg/L 96 h
	(Danio rerio)	(Daphnia magna)	(Pseudokirchneriella subcapitata)
Tetrahydrofurfuryl methacrylate	LC50 31.1 - 38.8 mg/L 96 h	-	-
	(Pimephales promela)		
Phenol, isopropylated,	LC50= 1.15 mg/L 96 h	EC50 = 14 mg/L 48 h	-
phosphate	(Oncorhynchus mykiss)	(Daphnia magna)	
	LC50= 1000 mg/L 96 h		
	(Brachydanio rerio)		
	LC50= 10.8 mg/L 96 h		
	(Pimephales promelas)		
Silane Coupling Agent	LC50 > 1024,00 mg/l 96 h	EC50 > 876,00 mg/l 48 h	EC50 > 536,00 mg/l 72 h
	(Brachydanio rerio)	(Daphnia magna)	(Scenedesmus subspicatus)

Persistence and degradability

No information available.

Bioaccumulation

Chemical Name	log Pow
Isobornyl Acrylate	4.52
Photoinitator	2.5

Mobility in soil

No product level data available.







9481-E

Issue Date 2019-03-14 Revision Date 2019-03-14 Version 4.02

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods

Dispose of waste in compliance with local and national regulations.

Contaminated packaging

Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

<u>DOT</u> Not regulated ICAO/IATA Not regulated IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

AICS Low Volume Exemption (LVE)

DSL/NDSL Complies **EINECS/ELINCS** Complies Complies **ENCS IECSC** Complies **KECI** Complies **NZIoC** Not listed **PICCS** Not listed Complies **TCSI**

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

AICS - Australian Inventory of Chemical Substances

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

NZIoC - New Zealand Inventory of Chemicals

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substance Inventory

US Federal Regulations

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

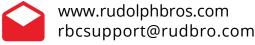
SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or 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

Acute health hazard





Yes

9481-E

Issue Date 2019-03-14 Revision Date 2019-03-14 Version 4.02

Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

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.

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hexamethylene diisocyanate	X	X	
Methyl alcohol	X	X	Х
Xylene	X	X	X
Toluene	X	X	X

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
Methyl alcohol	Developmental
67-56-1 (0.019 %)	
Toluene	Developmental
108-88-3 (0.0005 %)	

16. OTHER INFORMATION

Prepared By EHS Department Revision Date 2019-03-14

Revision Note No information available

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

end





