



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: 29 CFR 1910.1200

9481-E

Issuing Date 13-Dec-2024

Revision date 13-Dec-2024

Revision Number 32

1. Identification

Product identifier

Product Name 9481-E

Other means of identification

Additional Information

The Environmental Protection Agency prohibits processing and distribution of this chemical/product for any use other than: (1) In hydraulic fluids either for the aviation industry or to meet military specifications for safety and performance where no alternative chemical is available that meets U.S. Department of Defense specification requirements, (2) In lubricants and greases for aerospace and turbine uses and, for all other lubricant and grease uses before November 21, 2039, (3) circuit boards and wire harnesses, including but not limited to terminal and fuse covers, cable sleeves, casings, connectors and tapes, (4) As an intermediate in the manufacture of cyanoacrylate glue, (5) In specialized engine air filters for locomotive and marine applications, (6) In adhesives and sealants before January 6, 2025, after which use in adhesives and sealants is prohibited, (7) In new parts for motor vehicles before November 21, 2039 and replacement parts for motor vehicles before November 19, 2054, (8) In new parts for aerospace vehicles before November 19, 2054 and replacement parts for aerospace vehicles after the end of the aerospace vehicles service lives, (9) In marine antifouling coating products that are registered under the Federal Insecticide, Fungicide, and Rodenticide Act and that meet U.S. Department of Defense specification requirements before November 19, 2029, (10) In new manufacturing equipment, new products or articles in the semiconductor industry, for new heating, ventilation, air-conditioning, refrigeration, and water-heating equipment, new power generating equipment, new laboratory equipment, new commercial electronic equipment, and new consumer electronic equipment before November 20, 2034, (11) replacement parts for manufacturing and laboratory equipment after the end of the equipment's service life, (12) replacement parts for heating, ventilation, air-conditioning, refrigeration, and water-heating equipment, for power generating equipment, and for commercial electronic equipment before November 19, 2049, (13) replacement parts for consumer electronic equipment before November 19, 2031, (14) in other articles before October 31, 2024, after which use in articles other than those with later phase-in prohibition dates or exclusions is prohibited. In addition, all persons are prohibited from releasing PIP (3:1) to water during manufacturing, processing, and distribution in commerce, and must follow all existing regulations and best practices to prevent the release of PIP (3:1) to water during the commercial use of PIP (3:1).

Recommended use of the chemical and restrictions on use

Recommended use Adhesives and/or sealants.

Restrictions on use Consumer use.

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**Classification**

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

Hazards not otherwise classified (HNOC)

Not applicable.

Label elements

Signal word Danger

Hazard statements

Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
May cause respiratory irritation.
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.
Wear protective gloves/clothing and eye/face protection.
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.

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: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

Precautionary Statements - Storage

Store locked up.
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

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

Testing for acute and chronic aquatic effects determined no environmental classification is required. 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-%
Multifunctional acrylate	Proprietary	*	30 - 60
Acrylate Ester	Proprietary	*	10 - 30
Methacrylate monomer	Proprietary	*	10 - 30
Photoinitiator	Proprietary	*	1 - 5
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]	68937-41-7	*	1 - 5
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	75980-60-8	*	1 - 5
Photoinitiator	Proprietary	*	0.1 - 1
Organofunctional Silane Ester	Proprietary	*	0.1 - 1
Silane Coupling Agent	Proprietary	*	0.1 - 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. Rinse mouth. 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.

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

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

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**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:	amber light
Odor:	Characteristic
Odor threshold:	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	101 °C / 213.8 °F	Pensky-Martens Closed Cup (PMCC)
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	438 °C / 820.4 °F	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	125 cP	

Other information

Explosive properties:	No information available
Oxidizing properties:	No information available
Softening point:	No information available
Molecular weight:	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. 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. 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): 7,782.30 mg/kg
ATEmix (dermal): 13,579.10 mg/kg
ATEmix (inhalation-dust/mist): 99,999.00 mg/l
ATEmix (inhalation-vapor): 99,999.00 mg/l

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
Acrylate Ester	= 4890 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
Methacrylate monomer	-	LD50 = 4000 mg/kg (Rat, OECD 401)	-
Photoinitiator	= 1694 mg/kg (Rat)	= 6929 mg/kg (Rat)	-

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]	> 5000 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	> 200 mg/L (Rat) 1 h
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Photoinitiator	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 10.6 mg/L (Rat) 4 h
Organofunctional Silane Ester	= 23.5 g/kg (Rat)	> 2000 mg/kg (Rat)	> 2.28 mg/L (Rat) 6 h
Silane Coupling Agent	= 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. Causes skin irritation.

Serious eye damage/eye irritation:

Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization:

May cause an allergic skin reaction.

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:

Classification based on data available for ingredients. May damage fertility or the unborn child.

STOT - single exposure:

May cause respiratory irritation.

STOT - repeated exposure:

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard:

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

12. Ecological information

Product Information

Testing for acute and chronic aquatic effects determined no environmental classification is required. OECD Test No. 202: Daphnia sp., Acute Immobilization Test.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Acrylate Ester	ErC 50 = 2.7 mg/L 96h (Pseudokirchneriella subcapitata)	LC50: =0.704mg/L 96h (Danio rerio)	EC 50 = 1.1 mg/L 48 h (Daphnia magna)
Methacrylate monomer	-	LC50: 31.1 - 38.8mg/L (96h, Pimephales promelas)	-
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]	-	LC50: =1.15mg/L (96h, Oncorhynchus mykiss) LC50: =1000mg/L (96h,	EC50: =14mg/L (48h, Daphnia magna)

		Brachydanio rerio) LC50: =10.8mg/L (96h, Pimephales promelas)	
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	-	LC50 10 mg/l 48 h (Oryzias latipes)	-
Organofunctional Silane Ester	EC50 > 536,00 mg/l 72 h (Scenedesmus subspicatus)	LC50: >100mg/L (96h Danio rerio)	EC50 > 876,00 mg/l 48 h (Daphnia magna)
Silane Coupling Agent	-	LC50: =191mg/L (96h, Oncorhynchus mykiss)	-

Persistence and degradability

No information available.

Bioaccumulation**Component Information**

Chemical name	Partition coefficient
Multifunctional acrylate	4.9
Acrylate Ester	4.52
Methacrylate monomer	1.76
Photoinitiator	1.62
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]	5.17
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	3.1
Photoinitiator	1.9
Organofunctional Silane Ester	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.

14. Transport information**IMDG** Not regulated**IATA** Not regulated**DOT** Not regulated**15. Regulatory information****International Inventories****TSCA Section 6 restricted substances**

This product contains a TSCA Section 6 restricted substance(s). Please see listed references to understand requirements and obligations under TSCA. Not all products containing restricted substances will necessarily be restricted.

Chemical name	CAS No.	References
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]	68937-41-7	See 40 CFR Part 751.407

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Commercial Activity Designation - Active

TSCA Complies

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

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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 does not contain any substances regulated as 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 contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Methanol 67-56-1 (<0.1)	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acrylic Acid <0.1 %	X	X	X
Methanol <0.1 %	X	X	X
Xylene <0.1 %	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)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(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)
U.S. 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

Revision date 13-Dec-2024

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

Disclaimer

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End of Safety Data Sheet