



SAFETY DATA SHEET

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

9451

Issuing Date 26-Mar-2025

Revision date 26-Mar-2025

Revision Number 32.01

1. Identification

Product identifier

Product Name 9451

Other means of identification

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 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

Hazards not otherwise classified (HNOC)

Not applicable.

Label elements

Signal word Danger

Hazard statements

Causes skin irritation.

Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.

**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.
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: 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.

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-%
Isobornyl Acrylate	5888-33-5	*	15 - 40
2-Hydroxyethyl methacrylate	868-77-9	*	3 - 7
Acrylic Acid	79-10-7	*	1 - 5

Photoinitiator	Proprietary	*	1 - 5
Peroxide	Proprietary	*	0.5 - 1.5
Organofunctional Silane Ester	Proprietary	*	0.1 - 1
Visible photoinitiator	Proprietary	*	0.1 - 1
Carbon Black	1333-86-4	*	0.1 - 1
Propoxylated Neopentyl Glycol Diacrylate Ester	84170-74-1	*	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

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Inhalation

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

Skin contact

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

Eye contact

Get immediate medical attention. 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.

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

Burning sensation. Itching. Rashes. Hives.

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. Use personal protective equipment as required. Ensure adequate ventilation. 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

Store locked up

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.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Acrylic Acid	TWA: 2 ppm S*	(vacated) TWA: 10 ppm (vacated) TWA: 30 mg/m ³ (vacated) S*	TWA: 2 ppm TWA: 6 mg/m ³
Carbon Black	TWA: 3 mg/m ³ inhalable particulate matter	TWA: 3.5 mg/m ³ (vacated) TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

Appropriate engineering controls**Engineering controls**

Ensure adequate ventilation, especially in confined areas.

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

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

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:	opaque
Color:	black
Odor:	Mild
Odor threshold:	No information available

Property	Values	Remarks • Method
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	238 °C / 460.4 °F	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	6,000 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 damage. May cause irreversible damage to eyes.

Skin contact:

Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. 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): 5,369.20 mg/kg
 ATEmix (dermal): 8,809.70 mg/kg
 ATEmix (inhalation-dust/mist): 44.60 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
Isobornyl Acrylate	= 4890 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
2-Hydroxyethyl methacrylate	= 5050 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
Acrylic Acid	= 193 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 11.1 mg/L (Rat) 1 h = 3.6 mg/L (Rat) 4 h
Photoinitiator	= 1694 mg/kg (Rat)	= 6929 mg/kg (Rat)	-
Peroxide	= 1012 mg/kg (Rat)	= 3817 mg/kg (Rabbit)	1.01 - 4.9 mg/L (Rat) 4 h
Organofunctional Silane Ester	= 23.5 g/kg (Rat)	> 2000 mg/kg (Rat)	> 2.28 mg/L (Rat) 6 h
Visible photoinitiator	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Carbon Black	> 15400 mg/kg (Rat)	-	> 4.6 mg/m ³ (Rat) 4 h
Propoxylated Neopentyl Glycol Diacrylate Ester	-	> 2000 mg/kg (Rat)	> 2.25 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Redness. Burning. May cause blindness. Itching. Rashes. Hives. 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 burns. Risk of serious damage to eyes.

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:

Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Acrylic Acid	-	Group 3	-	-
Carbon Black	A3	Group 2B	-	X

Legend:

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans Group 3 - Not Classifiable as to Carcinogenicity in Humans

Occupational Safety and Health Administration of the US Department of Labor

X - Present

Reproductive toxicity:

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

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	Crustacea
Isobornyl Acrylate	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)
2-Hydroxyethyl methacrylate	-	LC50: 213 - 242mg/L (96h, Pimephales promelas) LC50: =227mg/L (96h, Pimephales promelas)	EC50 > 380 mg/l 48 h (Daphnia magna)
Acrylic Acid	EC50: =0.04mg/L (72h, Desmodesmus subspicatus) EC50: =0.17mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =222mg/L (96h, Brachydanio rerio) NOEC: >= 10.1mg/L (45d, Oryzias latipes, OECD 210)	EC50: =95mg/L (48h, Daphnia magna) NOEC: =3.8mg/L (21d, Daphnia magna)
Peroxide	ErC50 = 0.8 mg/l 72h } par (Green Algae)	LC50: =1.6mg/L 96h (Danio rerio)	EC50 = 11 mg/l 48h (Daphnia magna)

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)
Visible photoinitiator	-	LC50: >90µg/L (96h, Danio rerio)	-
Propoxylated Neopentyl Glycol Diacrylate Ester	-	LC50: =2.7mg/L (96h, Danio rerio)	-

Persistence and degradability

No information available.

Bioaccumulation**Component Information**

Chemical name	Partition coefficient
Isobornyl Acrylate	4.52
2-Hydroxyethyl methacrylate	0.42
Acrylic Acid	0.46
Photoinitiator	1.62
Peroxide	3
Organofunctional Silane Ester	2.1
Visible photoinitiator	5.8
Propoxylated Neopentyl Glycol Diacrylate Ester	4.86

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****Commercial Activity Designation** - Active**TSCA** Complies
AIIC Complies
DSL/NDSL Listed on NDSL

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECI	Complies
PICCS	Low Volume Exemption (LVE)
NZIoC	Complies
TCSI	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
AIICS - Australian Industrial Chemicals Introduction Scheme
DSL/NDL - 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 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.

Chemical name	SARA 313 - Threshold Values %
Acrylic Acid	1.0

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, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Acrylic Acid	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Carbon Black 1333-86-4 (0.1 - 1)	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acrylic Acid 1 - 5 %	X	X	X

Peroxide 0.5 - 1.5 %	X	X	X
Carbon Black 0.1 - 1 %	X	X	X
tert-Butyl hydroperoxide <0.1 %	X	X	X
Antioxidant <0.1 %	X	X	X

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

Not applicable

16. Other information

NFPA **Health hazards** 3 **Flammability** 1 **Instability** 0 **Special hazards** -
HMIS **Health hazards** 3 * **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 26-Mar-2025

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

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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 of Safety Data Sheet