

## SAFETY DATA SHEET

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

**431**

Issuing Date 11-Nov-2021

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Revision Number 30

### 1. Identification

#### Product identifier

Product Name **431**

#### 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 1
Skin sensitization	Category 1
Reproductive toxicity	Category 2

#### **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 damaging fertility or the unborn child.



#### 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.

#### 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.

#### Precautionary Statements - Storage

Store locked up.

#### 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-%
Isobornyl Methacrylate	7534-94-3	*	25-39
Methacrylate Ester Monomer	Proprietary	*	25-39
Acrylic Acid	79-10-7	*	3-<5
Visible Photoinitiator	Proprietary	*	1-<3
Silane Coupling Agent	Proprietary	*	1-<3

\*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.

#### **Ingestion**

Clean mouth with water and drink afterwards plenty of water. 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.

#### **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 advice/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 CO<sub>2</sub>.

### 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 (CO<sub>2</sub>). Carbon monoxide. Hydrocarbons. Nitrogen oxides (NO<sub>x</sub>).

### 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. Protect from light.

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

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Acrylic Acid	TWA: 2 ppm S*	(vacated) TWA: 10 ppm (vacated) TWA: 30 mg/m <sup>3</sup> (vacated) S*	TWA: 2 ppm TWA: 6 mg/m <sup>3</sup>

**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

Tight sealing safety 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:	colorless
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	No information 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	No information available
Solubility(ies):	No data available	No information available
Partition coefficient:	No data available	No information available
Autoignition temperature:	No data available	No information available
Decomposition temperature:	No data available	No information available
Kinematic viscosity:	No data available	No information available
Dynamic viscosity:	600 cP	
<u>Other information</u>		
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 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. (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): 6,369.20 mg/kg  
 ATEmix (dermal): 7,225.70 mg/kg  
 ATEmix (inhalation-dust/mist): 56.90 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
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Methacrylate Ester Monomer	= 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
Visible Photoinitiator	-	> 2000 mg/kg ( Rat )	-
Silane Coupling Agent	= 7.01 g/kg ( Rat )	= 3.97 mL/kg ( Rabbit )	> 5.3 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:** Based on available data, the classification criteria are not met.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Acrylic Acid	-	Group 3	-	-

#### **Legend:**

**IARC (International Agency for Research on Cancer)**

Group 3 - Not Classifiable as to Carcinogenicity in Humans

- 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:** Not classified. Based on available data, the classification criteria are not met.
- STOT - repeated exposure:** Not classified. Based on available data, the classification criteria are not met.
- Target organ effects:** Respiratory system. Eyes. Skin.
- Aspiration hazard:** Not classified. Based on available data, the classification criteria are not met.

## **12. Ecological information**

### Ecotoxicity

#### **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	Toxicity to microorganisms	Crustacea
Isobornyl Methacrylate	-	LC50: =1.79mg/L (96h, Danio rerio)	-	-
Methacrylate Ester Monomer	-	LC50: 213 - 242mg/L (96h, Pimephales promelas) LC50: =227mg/L	-	EC50 > 380 mg/l 48 h (Daphnia magna)

		(96h, Pimephales promelas)		
Acrylic Acid	EC50: =0.04mg/L (72h, Desmodemus 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)
Visible Photoinitiator	-	LC50 10 mg/l 48 h (Oryzias latipes)	-	-
Silane Coupling Agent	-	LC50: =55mg/L (96h, Cyprinus carpio)	-	-

**Persistence and degradability**

No information available.

**Bioaccumulation**

There is no data for this product.

**Component Information**

Chemical name	Partition coefficient
Methacrylate Ester Monomer	0.47
Acrylic Acid	0.46

**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:** U008**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	Not Listed
DSL/NDL	Not Listed
EINECS/ELINCS	Complies
ENCS	Not Listed
IECSC	Simplified Notification
KECL	R&D Exemption No. 07-1802-002958
PICCS	Not Listed
NZIoC	Not Listed
TCSI	Not Listed

**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

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acrylic Acid	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)  
 EPA (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)  
 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** 11-Nov-2021

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

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**End of Safety Data Sheet**