

## SAFETY DATA SHEET

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

### 429

Issuing Date 11-Nov-2021

Revision date 11-Nov-2021

Revision Number 29

#### 1. Identification

##### Product identifier

**Product Name** 429

**Product Description** Polyether Urethane Acrylate

##### 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 1
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.  
 May cause respiratory irritation.

**Precautionary Statements - Prevention**

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 in a well-ventilated place. Keep container tightly closed.  
 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-%
Acrylate Ester	Proprietary	*	25-39
Methacrylate Ester Monomer	Proprietary	*	10-24
Acrylate monomer	Proprietary	*	3-<5
Acrylic Acid	79-10-7	*	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**

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 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. 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

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**

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. 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

<b>Physical state:</b>	Liquid
<b>Appearance:</b>	transparent
<b>Color:</b>	colorless, light yellow, to
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH:</b>	No data available	No information available
<b>pH (as aqueous solution):</b>	No data available	Not applicable
<b>Melting point / freezing point:</b>	No data available	No information available
<b>Boiling point / boiling range:</b>	No data available	
<b>Flash point:</b>	101 °C / 214 °F	Pensky-Martens Closed Cup (PMCC)
<b>Evaporation rate:</b>	No data available	No information available
<b>Flammability (solid, gas):</b>	No data available	Not applicable
<b>Flammability Limit in Air</b>		
<b>Upper flammability or explosive limits:</b>	No data available	No information available
<b>Lower flammability or explosive limits:</b>	No data available	No information available
<b>Vapor pressure:</b>	No data available	No information available
<b>Relative vapor density:</b>	No data available	No information available
<b>Relative density:</b>	No data available	No information available
<b>Water solubility:</b>	partially soluble	No information available
<b>Solubility(ies):</b>	No data available	No information available
<b>Partition coefficient:</b>	No data available	No information available
<b>Autoignition temperature:</b>	438 °C / 820.4 °F	No information available
<b>Decomposition temperature:</b>	No data available	No information available
<b>Kinematic viscosity:</b>	No data available	No information available
<b>Dynamic viscosity:</b>	2,500 cP	
<b><u>Other information</u></b>		

<b>Explosive properties:</b>	No information available
<b>Oxidizing properties:</b>	No information available
<b>Softening point:</b>	No information available
<b>Molecular weight:</b>	No information available
<b>VOC Content (%):</b>	No information available
<b>Liquid Density:</b>	No information available
<b>Bulk density:</b>	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):	5,775.30 mg/kg
ATEmix (dermal):	5,549.70 mg/kg
ATEmix (inhalation-dust/mist):	103.30 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 Ester Monomer	= 5050 mg/kg ( Rat )	> 3000 mg/kg ( Rabbit )	-
Acrylate monomer	-	1000 - 2000 mg/kg ( Rabbit ) > 2000 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
Silane Coupling Agent	= 23.5 g/kg ( Rat )	> 2000 mg/kg ( Rat )	> 2.28 mg/L ( Rat ) 6 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.

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:** 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.
- 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	Fish	Toxicity to	Crustacea
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	plants		microorganisms	
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)
Methacrylate Ester Monomer	-	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)
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)

**Persistence and degradability**

No information available.

**Bioaccumulation**

There is no data for this product.

**Component Information**

Chemical name	Partition coefficient
Acrylate Ester	4.52
Methacrylate Ester Monomer	0.47
Acrylic Acid	0.46
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: U008

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



**15. Regulatory information****International Inventories**

TSCA Complies

<b>AIIC</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Not Listed
<b>NZIoC</b>	Complies
<b>TCSI</b>	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 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 %
Acrylate monomer	1.0
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
2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester	X	-	X
Acrylic Acid	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

**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**