Safety Data Sheet

according to HazCom 2012

SDS # : OP-4-20641

OP-4-20641

Issue Date 2015-04-01 **Revision Date** 2015-04-01 **Version** 1

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

Product identifier

Product Name OP-4-20641

Other means of identification

Product Code OP-4-20641

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 state liquid
Odor Characteristic
Color colorless
Appearance transparent

Classification

OSHA Regulatory Status

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

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

Target Organ Effects

Respiratory system, EYES, Skin.

GHS Label elements, including precautionary statements

Signal word Danger

Hazard statements
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H351 - Suspected of causing cancer
H361 - Suspected of damaging fertility or the unborn child
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness

Precautionary Statements - Prevention
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response
IF exposed or concerned, 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 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 INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF SWALLOWED Get medical advice/attention if you feel unwell
Collect spillage.

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.

Hazards not otherwise classified (HNOC)
None

Other Information
May be harmful if swallowed
Unknown acute toxicity
1E-08% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

Hazardous

Chemical Name	CAS No	Weight-%	Trade Secret	Classification (Reg. 1272/2008)

2-Hydroxyethyl methacrylate	868-77-9	10 - 30	*	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1 (H317)
Acrylate Monomer	Proprietary	5 - 10	*	Acute Tox.4 (H312) Skin Irrit. 2 (H315) Eye Irrit. 2B (H320) Skin Sens. 1 (H317)
Acrylic acid	79-10-7	1 - 5	*	Flam. Liq. 3 (H226) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Corr. 1A (H314) Aquatic Acute 1 (H400)
Isobornyl Acrylate	5888-33-5	1 - 5	*	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Chronic 2 (H411)
Photoinitiator	Proprietary	0.1 - 1	*	STOT RE 2 (H373) Aquatic Chronic 2 (H411)
Visible Photoinitiator	Proprietary	0.1 - 1	*	Repr. 2 (H361f) Aquatic Chronic 2 (H411)

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

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

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 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
Move 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.

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.

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/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

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Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acrylic acid	TWA: 2 ppm S*	(vacated) TWA: 10 ppm (vacated) TWA: 30 mg/m³ S*	TWA: 2 ppm TWA: 6 mg/m³

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
TLV - Threshold Limit Value
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEL - Permissible Exposure Limits
NIOSH IDLH
Immediately Dangerous to Life or Health

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 suitable 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

Hygiene measures
When using, do not eat, drink or smoke, Handle in accordance with good industrial hygiene and safety practice, Wear suitable gloves and eye/face protection, Wash hands before breaks and at the end of workday, Avoid breathing vapors, mist or gas, 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	colorless	**Odor threshold**	No information available

Property	**Values**	**Remarks / • Method**
pH		No information available
Melting point/freezing point		No information available
Boiling point / boiling range		No information available
Flash point	101 °C / 214 °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
Vapor density		No information available
Specific Gravity		No information available
Water Solubility VALUE		No information available

Solubility in other solvents		No information available
Partition coefficient: n-octanol/water		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Dynamic viscosity	21,000 cP	
Kinematic viscosity		No information available

Explosive properties	No information available
Oxidizing properties	No information available

Other Information

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

Hazardous polymerization
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 likely routes of exposure

Product Information
No acute toxicity information is available for this product

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

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2-Hydroxyethyl methacrylate	= 5050 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	
Acrylate Monomer		LD50 > 1,000 mg/kg (Rabbit)	
Acrylic acid	= 33500 µg/kg (Rat)	= 280 µL/kg (Rabbit)	= 5300 mg/m³ (Rat) 2 h
Isobornyl Acrylate	= 4890 mg/kg (Rat)	> 5 g/kg (Rabbit)	
Photoinitiator	> 10 g/kg (Rat)	= 3535 mg/kg (Rabbit)	

Information on toxicological effects

Symptoms No information available.

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

Sensitization May cause sensitization of susceptible persons.
Mutagenic effects No information available.
Reproductive toxicity No information available.
Carcinogenicity .

Chemical Name	ACGIH	IARC	NTP	OSHA
Photoinitiator	-	Group 2B		X

Legend

IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Respiratory system, EYES, Skin.
Chronic toxicity Repeated contact may cause allergic reactions in very susceptible persons
Avoid repeated exposure
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 1E-08% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 4528 mg/kg
ATEmix (dermal) 13356 mg/kg
ATEmix (inhalation-dust/mist) 41.3 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

6.5336% of the mixture consists of components(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 algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
2-Hydroxyethyl methacrylate	-	LC50 = 227 mg/L 96 h (Pimephales promelas)	EC50 > 380 mg/l 48 h (Daphnia magna)
Acrylic acid	EC50 0.04 mg/L 72 h (Desmodesmus subspicatus)	LC50 = 222 mg/L 96 h (Brachydanio rerio)	EC50 = 95 mg/L 48 h
Isobornyl Acrylate	ErC 50 = 2.7 mg/L 96 h (Pseudokirchneriella subcapitata)	LC50 = 1.8 mg/L 96 h (Danio rerio)	EC 50 = 1.1 mg/L 48 h (Daphnia magna)
Photoinitiator	-	LC50 43 mg/L 96h (Brachydanio rerio)	EC50 30.1 mg/L 24h (Daphnia magna)

Visible Photoinitiator	-	LC50 10 mg/l 48 h (Oryzias latipes)	-

Persistence and degradability No information available.

Bioaccumulation No information available.

Mobility .

Chemical Name	log Pow
2-Hydroxyethyl methacrylate	0.47
Acrylic acid	0.46
Photoinitiator	3.58

Other adverse effects None

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging
Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO/IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
AICS	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
NZIoC	Not listed
PICCS	Not listed
ECSI	Complies

Legend:
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
ECSI - Taiwan Existing Substance Inventory

US Federal Regulations

OSHA Regulatory Status
This material is considered hazardous by the 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:

Chemical Name	SARA 313 - Threshold Values %
2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester	1.0
Acrylic acid	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

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	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acrylic acid	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65
This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Acrylate Monomer	X		X
Acrylic acid	X	X	X

16. OTHER INFORMATION

Prepared By EHS Department
Revision Date 2015-04-01

Revision Note No information available

Disclaimer
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