

Manufacturer:

Dymax®

Product Name:

Dymax OP-21 Plastic Bonding Adhesive, Optically Clear, UV Cure - 30ml Syringe

Manufacturer Part Number:

OP-21-30ML

Click here for more details on the Dymax OP-21 Plastic Bonding Adhesive, Optically Clear, UV Cure - 30ml Syringe



SAFETY DATA SHEET

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

OP-21

Issuing Date 16-Aug-2023 Revision date 16-Aug-2023 Revision Number 30.01

1. Identification

Product identifier

Product Name OP-21

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

		Emergency Overview		
Appearance	translucent	Physical state Liquid	Odor	Characteristic

Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Page 1/10





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Issuing Date 16-Aug-2023 Revision date 16-Aug-2023 Revision Number 30.01

Signal word

Danger

Hazard statements

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction Suspected of damaging fertility or the unborn child. 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.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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-%

Data is subject to change without notice.





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Issuing Date 16-Aug-2023 Revision date 16-Aug-2023 Revision Number 30.01

Acrylate Ester	Proprietary	*	25-39
N,N-Dimethylacrylamide	2680-03-7	*	10-24
Photoinitiator	Proprietary	*	1-<3
Visible Photoinitiator	Proprietary	*	<1
Methacrylate Ester Monomer	Proprietary	*	<1
Epoxy Resin	Proprietary	*	<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. Immediate medical attention is required.

Ingestion

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

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

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.

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

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 (NOx).

<u>Explosion data</u> Sensitivity to mechanical impact: None.

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OP-21

Issuing Date 16-Aug-2023 Revision date 16-Aug-2023 Revision Number 30.01

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

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

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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.

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

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: translucent Color: amber colorless to Characteristic Odor: Odor threshold: No information available

Values

Property

No data available pH (as aqueous solution): No data available Melting point / freezing point: Boiling point / boiling range: No data available No data available 101 °C / 213.8 Flash point: No data available

Evaporation rate: Flammability (solid, gas): No data available

Flammability Limit in Air
Upper flammability or explosive limits: No data available Lower flammability or explosive limits: No data available No data available Vapor pressure: Relative vapor density: No data available Relative density: Water solubility: No data available Insoluble in water No data available

Solubility(ies): Partition coefficient: No data available 470 °C / 878 °F Autoignition temperature: No data available Decomposition temperature: Kinematic viscosity: No data available

Dynamic viscosity:

Other information

Explosive properties: No information available Oxidizing properties: No information available Softening point: No information available Molecular weight: No information available No information available Liquid Density: **Bulk density:** No information available Remarks • Method

No information available Not applicable

No information available No information available

Pensky-Martens Closed Cup (PMCC)

No information available

Not applicable

No information available No information available No information available No information available No information available

No information available No information available No information available No information available No information available





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10. Stability and reactivity

Reactivity
No information available.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

<u>Hazardous polymerization</u> None under normal processing

<u>Conditions to avoid</u> 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

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.

Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

1,307.10 mg/kg ATEmix (oral): ATEmix (dermal): 3,179.20 mg/kg ATEmix (inhalation-gas): 99,999.00 ppm 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)	-
N,N-Dimethylacrylamide	= 316 mg/kg (Rat)	907mg/kg (Rabbit)	> 776 ppm (Rat) 1 h
	1	1	





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Photoinitiator	= 1694 mg/kg (Rat)	= 6929 mg/kg (Rat)	-
Visible Photoinitiator	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Methacrylate Ester Monomer	= 5050 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
Epoxy Resin	= 11400 mg/kg (Rat)	-	-

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:

Germ cell mutagenicity:

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

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

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:

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

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	LC50: =0.704mg/L 96h	EC 50 = 1.1 mg/L 48 h
	(Pseudokirchneriella subcapitata)	(Danio rerio)	(Daphnia magna)
N,N-Dimethylacrylamide	-	LC50: >100mg/L 96h	EC50 > 120 mg/l 48 h
		(Oncorhynchus mykiss)	(Daphnia magna)
Visible Photoinitiator	-	LC50 10 mg/l 48 h	-
		(Oryzias latipes)	
Methacrylate Ester Monomer	-	LC50: 213 - 242mg/L (96h,	EC50 > 380 mg/l 48 h (Daphnia
		Pimephales promelas)	magna)
		LC50: =227mg/L (96h,	-







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Pimephales promelas)

Persistence and degradability

No information available.

Bioaccumulation

There is no data for this product.

Component Information

Chemical name	Partition coefficient
Acrylate Ester	4.52
N,N-Dimethylacrylamide	-0.3
Photoinitiator	1.62
Visible Photoinitiator	3.1
Methacrylate Ester Monomer	0.42

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

<u>IMDG</u> Not regulated <u>IATA</u> Not regulated DOT Not regulated

15. Regulatory information

International Inventories

US TSCA inactive/active designation - Active

TSCA - Complies

AIIC Low Volume Exemption (LVE)

DSL/NDSL EINECS/ELINCS Complies Complies **ENCS** Complies

IECSC Simplified Notification

KECL Complies Complies Complies **PICCS NZIoC** TCSI Complies

Legend:

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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 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 EPČRA 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 does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Stabilizer	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

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Issuing Date 16-Aug-2023 Revision date 16-Aug-2023 Revision Number 30.01

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

16-Aug-2023 Revision date

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

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best 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

