

SAFETY DATA SHEET (SDS)

**Manufacturer:**

Dymax®

Product Name:

Dymax OP-21 Plastic Bonding Adhesive, Optically Clear, UV Cure - 3ml Syringe

Manufacturer Part Number:

OP-21-3ML

▶ [Click here for more details on the Dymax OP-21 Plastic Bonding Adhesive, Optically Clear, UV Cure - 3ml 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-21Other means of identificationRecommended 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.comEmergency telephone number**24 Hour Emergency Phone Number** Chemtrec 1-800-424-9300**2. Hazard(s) identification****Emergency Overview****Appearance** translucent **Physical state** Liquid **Odor** CharacteristicClassification

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

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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-%
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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.

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 (NOx).

Explosion data

Sensitivity to mechanical impact: None.

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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.

Tight sealing safety goggles.

Wear suitable protective clothing. Long sleeved clothing.

Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Information on basic physical and chemical properties

<u>Property</u>	<u>Values</u>
pH:	No data available
pH (as aqueous solution):	No data available
Melting point / freezing point:	No data available
Boiling point / boiling range:	No data available
Flash point:	101 °C / 213.8 °F
Evaporation rate:	No data available
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
Vapor pressure:	No data available
Relative vapor density:	No data available
Relative density:	No data available
Water solubility:	Insoluble in water
Solubility(ies):	No data available
Partition coefficient:	No data available
Autoignition temperature:	470 °C / 878 °F
Decomposition temperature:	No data available
Kinematic viscosity:	No data available
Dynamic viscosity:	450 cP

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

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

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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.

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. Harmful if swallowed. (based on components).

Acute toxicity

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

ATEmix (oral):	1,307.10 mg/kg
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

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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:

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.

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

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		Pimephales promelas	
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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

IMDG Not regulated**IATA** Not regulated**DOT** Not regulated

15. Regulatory information

International Inventories**US TSCA inactive/active designation** - Active**TSCA** - Complies

AIIC	Low Volume Exemption (LVE)
DSL/NDL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Simplified Notification
KECL	Complies
PICCS	Complies
NZIoC	Complies
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 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, 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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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

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

Disclaimer

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End of Safety Data Sheet

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