1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
900 First Avenue
King of Prussia, Pennsylvania 19406

Sartomer

Customer Service Telephone Number: (800) SARTOMER
(Monday through Friday, 8:00 AM to 5:00 PM EST)

Emergency Information

Transportation: CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: N3D-DMT303
Synonyms: Proprietary Resin Formulation
Molecular formula: Proprietary Material
Chemical family: resin
Product use: 3D printing

SECTION 2: HAZARDS IDENTIFICATION

Emergency Overview

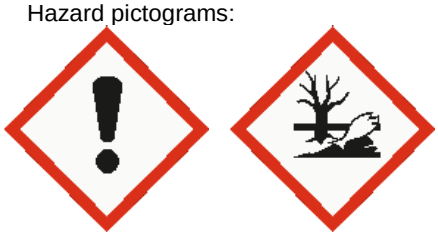
Color: tan
Physical state: liquid
Odor: acrylic-like

***Classification of the substance or mixture:**
GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Dermal: Acute toxicity, Category 4, H312
Skin irritation, Category 2, H315
Eye irritation, Category 2A, H319
Skin sensitisation, Category 1, H317
Chronic aquatic toxicity, Category 2, H411

*For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labelling

Hazard pictograms:



Signal word: **Warning**

Hazard statements:

H312 : Harmful in contact with skin.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
H411 : Toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements:

Processing may release vapors and/or fumes which cause eye, skin and respiratory tract irritation.

Precautionary statements:

Prevention:
P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 : Wash skin thoroughly after handling.
P272 : Contaminated work clothing should not be allowed out of the workplace.
P273 : Avoid release to the environment.
P280 : Wear eye protection and face protection.
P280 : Wear protective gloves/ protective clothing.

Response:
P302 + P352 : IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 : If eye irritation persists: Get medical advice/ attention.
P362 : Take off contaminated clothing and wash before reuse.
P391 : Collect spillage.

Storage:
P405 : Store locked up.

Disposal:
P501 : Dispose of contents or container to an approved waste disposal plant.

Supplemental information:

Potential Health Effects:
If swallowed may cause irritation of the digestive tract. Possible cross sensitization with other acrylates and methacrylates. Effects due to processing releases or residual monomer: Irritating to eyes, respiratory system and skin.
Prolonged or repeated exposure may cause: headache, drowsiness, nausea, weakness, (severity of effects depends on extent of exposure).

Other:
Product not completely tested. Take maximum precautions when handling. This product may release fume and/or vapor of variable composition depending on processing time and temperature.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Wt/Wt	GHS Classification**
Crosslinking acrylate monomer	Proprietary*	>= 30 - < 60 %	H317, H411
Acrylate oligomer	Proprietary*	>= 30 - < 60 %	H317, H411
Acrylate ester	Proprietary*	>= 10 - < 30 %	H315, H317, H411
Acrylic ester	Proprietary*	>= 10 - < 30 %	H311, H315, H319, H317
Silane, dichlorodimethyl-, reaction products with silica (nanoform)	68611-44-9	>= 1 - < 5 %	Not classified
Proprietary additive	Proprietary*	>= 1 - < 5 %	H317, H413
2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester	15625-89-5	>= 0.1 - < 1 %	H315, H319, H317, H351, H400, H410
2-Propenoic acid	79-10-7	>= 0.1 - < 1 %	H226, H302, H332, H312, H314, H318, H335, H400, H411

*The specific chemical identity is withheld because it is trade secret information of Arkema Inc.

**For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

Inhalation:
If inhaled, remove victim to fresh air.

Skin:
In case of contact, immediately flush skin with soap and plenty of water. Get medical attention. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion:
If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms/effects, acute and delayed:

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information if applicable) and Section 11 (Toxicology Information) of this SDS.

4.3. Indication of any immediate medical attention and special treatment needed:

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media (suitable):
Water spray, Carbon dioxide (CO2), Foam, Dry chemical

Protective equipment:
Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:
Fight fire from a protected location.
Cool closed containers exposed to fire with water spray.
Closed containers of this material may explode when subjected to heat from surrounding fire.
Do not allow run-off from fire fighting to enter drains or water courses.
Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:

When burned, the following hazardous products of combustion can occur:
Carbon oxides
Hazardous organic compounds
Metal oxides
sulfur oxides
phosphorous oxides
Silicone compounds
Formaldehyde
Polymerization is exothermic and can degenerate into an uncontrolled reaction.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:
Prevent further leakage or spillage if you can do so without risk. Ventilate the area. Avoid generation of vapors. Contain and collect spillage with non-combustible absorbent material such as clean sand, earth, diatomaceous earth or non-acidic clay and place into suitable properly labeled containers for prompt disposal. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Protective equipment:
Appropriate personal protective equipment is set forth in Section 8.

SECTION 7: HANDLING AND STORAGE

Handling

General information on handling:
Avoid breathing vapor or mist.
Avoid contact with skin, eyes and clothing.
Wash thoroughly after handling.
Emptied container retains vapor and product residue.
Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Storage

General information on storage conditions:
Keep in a dry, cool place. Store in closed containers, in a secure area to prevent container damage and subsequent spillage. Store out of direct sunlight in a cool well-ventilated place. Keep stabilizer levels constant to avoid explosive polymerization. An air space is required above the liquid in all containers; avoid storage under an oxygen-free atmosphere.

Storage stability – Remarks:
Inhibitor levels should be maintained. The typical shelf-life for this product is 6 months.

Storage incompatibility – General:
Store separate from:

Strong oxidizing agents
Strong reducing agents
Free radical generators
Inert gas
Oxygen scavenger.
Peroxides
Strong acids
Strong bases

Temperature tolerance – Do not store below:
32 °F (0 °C)

Temperature tolerance – Do not store above:
100 °F (38 °C)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Silane, dichlorodimethyl-, reaction products with silica (nanoform) (68611-44-9)

US. ACGIH Threshold Limit Values

Form:	Respirable particles.
Time weighted average	3 mg/m3
Form:	Inhalable particles.
Time weighted average	10 mg/m3

US. OSHA Table Z-3 (29 CFR 1910.1000)

Form:	Total dust
Time weighted average	50millions of particles per cubic foot of air

US. OSHA Table Z-3 (29 CFR 1910.1000)

Form:	Total dust
Time weighted average	15 mg/m3

US. OSHA Table Z-3 (29 CFR 1910.1000)

Form:	Respirable fraction.
Time weighted average	5 mg/m3

US. OSHA Table Z-3 (29 CFR 1910.1000)

Form:	Respirable fraction.
Time weighted average	15millions of particles per cubic foot of air

US. OSHA Table Z-3 (29 CFR 1910.1000)

Time weighted average	0.8 mg/m3
Remarks:	The exposure limit is calculated from the equation, 80/(%SiO2), using a value of 100% SiO2. Lower values of % SiO2 will give higher exposure limits.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Time weighted average	20millions of particles per cubic foot of air

2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester (15625-89-5)

US. OARS. WEELs Workplace Environmental Exposure Level Guide, as amended

Time weighted average	1 mg/m3
Remarks:	Avoid skin or eye contact with liquids or aerosols.
Remarks:	Listed
Skin designation	
Remarks:	Can be absorbed through the skin.

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:
Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Respiratory protection:
Avoid breathing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if

applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:
Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Avoid natural rubber gloves. Wear chemical goggles, a face shield, and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing immediately and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye protection:
Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment immediately available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Color:	tan
Physical state:	liquid
Odor:	acrylic-like
Odor threshold:	No data available.
Flash point	No data available
Auto-ignition temperature:	No data available.
Lower flammable limit (LFL):	No data available.
Upper flammable limit (UFL):	No data available.
pH:	No data available.
Density:	No data available
Specific Gravity (Relative density):	No data available
Vapor pressure:	No data available.

Vapor density:	No data available.
Boiling point/boiling range:	No data available.
Melting point/range:	No data available.
Freezing point:	No data available.
Evaporation rate:	No data available.
Solubility in water:	No data available.
Viscosity, dynamic:	385 CPS 77 °F (25 °C) (Method: Brookfield)
Oil/water partition coefficient:	No data available.
Thermal decomposition:	No data available.
Flammability:	See GHS Classification in Section 2 if applicable

SECTION 10: STABILITY AND REACTIVITY

Stability:
This material is chemically stable under normal and anticipated storage, handling and processing conditions. However, this material can undergo hazardous polymerization.

Hazardous reactions:
Hazardous polymerisation may occur.
Polymerization is exothermic and can degenerate into an uncontrolled reaction.

Materials to avoid:
Strong reducing agents
Free radical generators
Inert gas
Oxygen scavenger.
Peroxides
Strong oxidizing agents
Strong acids
Strong bases

Conditions / hazards to avoid:
This material polymerizes exothermically in the presence of heat, contamination, oxygen free atmosphere, free radicals, peroxides and inhibitor depletion liberating heat. Avoid direct sunlight. Do NOT expose to ultraviolet light.

Hazardous decomposition products:

Thermal decomposition giving flammable and toxic products :
Carbon oxides
Hazardous organic compounds

Metal oxides
Methacrylates
Acrylates
phosphorous oxides
sulfur oxides
Silicone compounds
Formaldehyde

SECTION 11: TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Data for N3D-DMT303

Acute toxicity

Dermal:
Harmful in contact with skin. Acute toxicity estimate = 1,918 mg/kg.

Data for Crosslinking acrylate monomer (Proprietary)

Acute toxicity

Oral:
No deaths occurred. (rat) LD0 = 2,000 mg/kg.

Dermal:
No deaths occurred. (rat) LD0 = 2,000 mg/kg.

Skin Irritation:
Practically non-irritating. (rabbit) (4 h)

Eye Irritation:
Not irritating. (In vitro) Bovine corneal opacity and permeability assay (BCOP)

Skin Sensitization:
May cause an allergic skin reaction. LLNA: Local Lymph Node Assay. (mouse) Skin allergy was observed. (Strong sensitizer)

Repeated dose toxicity
Repeated oral administration to rat / No adverse systemic effects reported.

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: animal cells, bacteria

Developmental toxicity
Reproductive/Developmental Effects Screening Assay. Oral (rat) / No birth defects were observed.

Reproductive effects

Reproductive/Developmental Effects Screening Assay. Oral (rat) / No toxicity to reproduction.

Data for Acrylate oligomer (Proprietary)

Acute toxicity

Oral:
No deaths occurred. (rat) LD0 = 2,000 mg/kg.

Dermal:
No deaths occurred. (rat) LD0 = 2,000 mg/kg.

Skin Irritation:
Not irritating. (rabbit) (4 h)

Eye Irritation:
Causes mild eye irritation. (rabbit)

Skin Sensitization:
May cause an allergic skin reaction. LLNA: Local Lymph Node Assay. (mouse) Skin allergy was observed.

Repeated dose toxicity
Subchronic oral administration to rat / affected organ(s): Prostate, Liver, Pituitary gland / signs: changes in organ weights, changes in organ structure or function

Repeated oral administration to rat / No adverse systemic effects reported.

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells

Genotoxicity

Assessment in Vivo:
No genetic changes were observed in a laboratory test using: mice

Developmental toxicity
Exposure during pregnancy. Oral (rat, rabbit) / No birth defects were observed.

Reproductive effects
Reproductive/Developmental Effects Screening Assay. Oral (rat) / No toxicity to reproduction.
Extended One-Generation Reproductive Toxicity Study. Oral (rat) / No toxicity to reproduction.

Other information
Possible cross sensitization with other acrylates and methacrylates.

Data for Acrylate ester (Proprietary)

Acute toxicity

Oral:
May be harmful if swallowed. (rat) LD50 > 2,000 mg/kg.

Dermal:
No deaths occurred. (rat) LD0 > 2,000 mg/kg.

Skin Irritation:
Causes skin irritation. (rabbit) (4 h)

Eye Irritation:
Causes mild eye irritation. (rabbit)

Skin Sensitization:
May cause an allergic skin reaction. LLNA: Local Lymph Node Assay. (mouse) Skin allergy was observed.

Repeated dose toxicity
Repeated oral administration to rat / affected organ(s): Gastro-intestinal tract, Stomach / signs: At high dose :, Local irritation / No adverse systemic effects reported.

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells

Genotoxicity

Assessment in Vivo:
No genetic changes were observed in a laboratory test using: mice

Developmental toxicity
Reproductive/Developmental Effects Screening Assay. Oral (rat) / No birth defects were observed.

Reproductive effects
Reproductive/Developmental Effects Screening Assay. Oral (rat) / No toxicity to reproduction.

Other information
Possible cross sensitization with other acrylates and methacrylates.

Data for Acrylic ester (Proprietary)

Acute toxicity

Oral:
Practically nontoxic. (rat) LD50 = 5,350 mg/kg.

Dermal:
Toxic in contact with skin. (rabbit) LD50 = 291 mg/kg.

Skin Irritation:
Causes skin irritation. (rabbit)

Eye Irritation:
Causes serious eye irritation. (rabbit)

Skin Sensitization:
May cause an allergic skin reaction. Guinea pig maximization test. Skin allergy was observed.

Carcinogenicity
Chronic dermal administration to mice / Increased incidence of tumors was reported. (According to limited available data, concentrated solutions)

Genotoxicity

Assessment in Vitro:
Both positive and negative responses for genetic changes were observed in laboratory tests using: bacteria, animal cells

Data for Silane, dichlorodimethyl-, reaction products with silica (nanoform) (68611-44-9)

Acute toxicity

Oral:
Practically nontoxic. (rat) LD50 > 5,000 mg/kg.

Inhalation:
No deaths occurred. (rat) 4 h LC0 = 0.477 mg/l. (dust/mist)

Skin Irritation:
Not irritating. (rabbit)

Eye Irritation:
Causes mild eye irritation. (rabbit)

Repeated dose toxicity
Subchronic inhalation administration to rat / affected organ(s): lung, lymph node / signs: increased organ weight, blood chemistry changes, Atrophy of olfactory epithelium

Chronic dietary administration to rat / No adverse systemic effects reported.

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells

Data for Proprietary additive (Proprietary)

Acute toxicity

Oral:
No deaths occurred. (rat) LD0 = 2,000 mg/kg.

Dermal:
No deaths occurred. (rat) LD0 = 2,000 mg/kg.

Skin Irritation:
Not irritating. (rabbit) (4 h)

Eye Irritation:
Causes mild eye irritation. (rabbit)

Skin Sensitization:
May cause allergic skin reaction. Guinea pig maximization test. Skin allergy was observed. (Strong sensitizer)

Repeated dose toxicity
Repeated oral administration to rat / No adverse systemic effects reported.

Subchronic oral administration to rat / No adverse systemic effects reported.

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells

Developmental toxicity
Exposure during pregnancy. Oral (rat) / No birth defects were observed.

Data for 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester (15625-89-5)

Acute toxicity

Oral:
May be harmful if swallowed. (rat) LD50 = 3,680 mg/kg.

Dermal:
Practically nontoxic. (rabbit) LD50 = 5,170 mg/kg.

May be harmful in contact with skin. (rat) LD50 > 2,000 mg/kg.

Inhalation:
No deaths occurred. (rat) 6 h LC0 > 0.55 mg/l. (vapor)

Skin Irritation:
Causes skin irritation. (rabbit) (4 h) (Repeated skin exposure)

Eye Irritation:
Causes serious eye irritation. (rabbit)

Skin Sensitization:
May cause an allergic skin reaction. Guinea pig maximization test. Skin allergy was observed. (Strong sensitizer)

Not a sensitizer. Mouse ear swelling assay. No skin allergy was observed.

Repeated dose toxicity
Repeated dermal administration to rabbit / affected organ(s): Skin / signs: Local irritation / No adverse systemic effects reported.

Subchronic dietary administration to rat / affected organ(s): Stomach / signs: Local irritation / No adverse systemic effects reported.

Repeated oral administration to rat / affected organ(s): Stomach / signs: Local irritation / No adverse systemic effects reported.

Carcinogenicity
Chronic dermal administration to mouse / affected organ(s): liver, uterus / Increase in tumor incidence was reported.
Classified by the International Agency for Research on Cancer as: Group 2B: Possibly carcinogenic to humans.

Genotoxicity

Assessment in Vitro:
Both positive and negative responses for genetic changes were observed in laboratory tests using: bacteria, animal cells

Genetic changes were observed in a laboratory test using: human cells

Genotoxicity

Assessment in Vivo:
No genetic changes were observed in a laboratory test using: mice

Developmental toxicity
Exposure during pregnancy. Oral (rabbit) / No birth defects were observed.
Exposure during pregnancy. Oral (rat) / No birth defects were observed. (at doses that produce effects in mothers)

Reproductive effects
Reproductive/Developmental Effects Screening Assay. Oral (rat) / No toxicity to reproduction.

Other information
Possible cross sensitization with other acrylates and methacrylates.

Human experience
Skin contact:
Skin: Skin allergy was observed. Sensitization described in isolated cases. (based on reports of occupational exposure to workers)

SECTION 12: ECOLOGICAL INFORMATION

Chemical Fate and Pathway

Data on this material and/or its components are summarized below.

Data for Crosslinking acrylate monomer (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 43.5 %

Octanol Water Partition Coefficient:
log Pow: = 3.58

Data for Acrylate oligomer (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 42 %

Octanol Water Partition Coefficient:
log Pow: = 1.6 - 3.8, at 73 °F (23 °C) pH = 6.3

Data for Acrylate ester (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 28 %

Octanol Water Partition Coefficient:
log Pow: = 1.9, at 73 °F (23 °C) pH = 6

Data for Proprietary additive (Proprietary)

Biodegradation:
Not readily biodegradable. (29 d) biodegradation 1 %

Bioaccumulation:
28 d BCF < 5 (Cyprinus carpio (Carp))

Octanol Water Partition Coefficient:
log Pow: = 5.8, at 72 °F (22 °C) pH = 8.3

Data for 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester (15625-89-5)

Biodegradation:
Readily biodegradable. (28 d) biodegradation 86 %

Octanol Water Partition Coefficient:
log Pow: = 4.35, at 68 °F (20 °C) (Method: calculated)

Data for 2-Propenoic acid (79-10-7)

Biodegradation:
Readily biodegradable. (28 d) biodegradation 81 %

Octanol Water Partition Coefficient:
log Pow: = 0.46, at 77 °F (25 °C)

Ecotoxicology
Data on this material and/or its components are summarized below.

Data for Crosslinking acrylate monomer (Proprietary)

Aquatic toxicity data:
Toxic. Danio rerio (zebra fish) 96 h LC50 = 1.8 mg/l

Aquatic invertebrates:
Harmful. Daphnia magna (Water flea) 48 h EC50 = 26.37 mg/l

Algae:
Toxic. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 = 4.88 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 3 h EC10 = 195.2 mg/l

Data for Acrylate oligomer (Proprietary)

Aquatic invertebrates:
No effect up to the limit of solubility. Daphnia magna (Water flea) 48 h EL50 > 100 mg/l (Water accommodated fraction was tested.)

Algae:
No effect up to the limit of solubility. Pseudokirchneriella subcapitata (microalgae) 72 h ErL50 = 105 mg/l (Water accommodated fraction was tested.)

Microorganisms:
Respiration inhibition / Activated sludge 3 h EC50 > 1,000 mg/l

Chronic toxicity to fish:
Toxic. Early-life Stage / Pimephales promelas (fathead minnow) 33 d NOEC = 0.25 mg/l

Chronic toxicity to aquatic invertebrates:
No effect up to the limit of solubility. Daphnia magna (Water flea) 21 d NOEC >= 0.51 mg/l

Chronic toxicity to aquatic plants:
Practically nontoxic. Pseudokirchneriella subcapitata (microalgae) 72 h ErC10 = 29 mg/l

Data for Acrylate ester (Proprietary)

Aquatic toxicity data:
Toxic. Oncorhynchus mykiss (rainbow trout) 96 h LC50 = 4 mg/l

Aquatic invertebrates:
Harmful. Daphnia magna (Water flea) 48 h EC50 = 20 mg/l

Algae:
Harmful. Desmodesmus subspicatus (green algae) 72 h ErC50 = 34 mg/l

Microorganisms:

Respiration inhibition / Activated sludge 3 h EC50 > 1,000 mg/l

Chronic toxicity to aquatic plants:
Practically nontoxic. Desmodesmus subspicatus (green algae) 72 h NOEC r = 9 mg/l

Data for Silane, dichlorodimethyl-, reaction products with silica (nanoform) (68611-44-9)

Aquatic toxicity data:
Practically nontoxic. Brachydanio rerio (zebrafish) 96 h LC50 > 10,000 mg/l (Nominal concentration)

Aquatic invertebrates:
Practically nontoxic. Daphnia magna (Water flea) 24 h EC50 > 10,000 mg/l (Nominal concentration)

Algae:
Practically nontoxic. Scenedesmus subspicatus (green algae) 72 h ErC50 > 10,000 mg/l (Nominal concentration)

Data for Proprietary additive (Proprietary)

Aquatic toxicity data:
No effect up to the limit of solubility. Danio rerio (zebra fish) 96 h LC50 > 0.09 mg/l

Aquatic invertebrates:
No effect up to the limit of solubility. Daphnia magna (Water flea) 48 h EC50 > 1.175 mg/l

Algae:
No effect up to the limit of solubility. Desmodesmus subspicatus (green algae) 72 h ErC50 > 0.260 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 3 h EC50 > 100 mg/l

Chronic toxicity to aquatic invertebrates:
No effect up to the limit of solubility. Reproduction Test / Daphnia magna (Water flea) 21 d NOEC > 0.008 mg/l

Chronic toxicity to aquatic plants:
No effect up to the limit of solubility. Desmodesmus subspicatus (green algae) 72 h NOEC r > 0.260 mg/l

Data for 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester (15625-89-5)

Aquatic toxicity data:
Very toxic. Danio rerio (zebra fish) 96 h LC50 = 0.87 mg/l

Aquatic invertebrates:
Harmful. Daphnia magna (Water flea) 48 h EC50 = 19.9 mg/l

Algae:
Toxic. Desmodesmus subspicatus (green algae) 96 h ErC50 = 4.86 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 30 min EC20 = 625 mg/l

Chronic toxicity to aquatic plants:

Practically nontoxic. Desmodesmus subspicatus (green algae) 72 h ErC10 = 1.9 mg/l

Data for 2-Propenoic acid (79-10-7)

Aquatic toxicity data:
Harmful. Oncorhynchus mykiss (rainbow trout) 96 h LC50 = 27 mg/l

Aquatic invertebrates:
Harmful. Daphnia magna (Water flea) 48 h EC50 = 95 mg/l

Algae:
Very toxic. Desmodesmus subspicatus (green algae) 72 h ErC50 = 0.13 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 30 min EC20 = 900 mg/l

Chronic toxicity to fish:
Practically nontoxic. Early-life Stage / Oryzias latipes (Japanese medaka) 45 d NOEC > 10.1 mg/l

Chronic toxicity to aquatic invertebrates:
Practically nontoxic. Reproduction Test / Daphnia magna (Water flea) 21 d NOEC = 19 mg/l

Chronic toxicity to aquatic plants:
Toxic. Desmodesmus subspicatus (green algae) 72 h ErC10 = 0.03 mg/l

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal:
Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

Take appropriate measures to prevent release to the environment.

SECTION 14: TRANSPORT INFORMATION

US Department of Transportation (DOT)

UN Number	:	3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s.
Technical name	:	(Crosslinking acrylate monomer, Acrylate oligomer)
Class	:	9
Packaging group	:	III
Marine pollutant	:	yes

International Maritime Dangerous Goods Code (IMDG)

UN Number	:	3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name	:	(CROSSLINKING ACRYLATE MONOMER, ACRYLATE OLIGOMER)
Class	:	9
Packaging group	:	III
Marine pollutant	:	yes

SECTION 15: REGULATORY INFORMATION

Chemical Inventory Status

US. Toxic Substances Control Act	TSCA	The components of this product are all on the Active TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	This product contains one or several components listed in the Canadian NDSL list. All other components are on the DSL list.
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	All components of this product are listed or exempted
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Not all components of this product are listed or exempted
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Not all components of this product are listed or exempted
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	All components of this product are listed or exempted
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	Not all components of this product are listed or exempted
Australian Inventory of Industrial Chemicals	AU AIICL	Not all components of this product are listed or exempted
Taiwan Chemical Substance Inventory (TCSI)	TCSI	Not all components of this product are listed or exempted

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:
The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories:
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitisation

Self-reactive chemicals

SARA Title III – Section 313 Toxic Chemicals:
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

Chemical name	CAS-No.	Reportable quantity
2-Propenoic acid	79-10-7	5000 lbs

United States – State Regulations

California Prop. 65
WARNING! This product contains a chemical known to the State of California to cause cancer.

Chemical name	CAS-No.
2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester	15625-89-5
Titanium oxide (TiO2)	13463-67-7
Nickel, complexes d'azo-5,5' bis-pyrimidinetrione-2,4,6(1H,3H,5H)	68511-62-6
Carbon black	1333-86-4

California Prop. 65
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Chemical name	CAS-No.
Benzene, methyl-	108-88-3
Methanol	67-56-1

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

Latest Revision(s):

Reference number:	200023193
Date of Revision:	10/31/2023
Date Printed:	11/01/2023

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