N3D-FR512

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-FR512
Synonyms: N3XTDIMENSION® FR512
Molecular formula: Proprietary
Chemical family: acrylic resin
Product use: Printing resin

SECTION 2: HAZARDS IDENTIFICATION

Emergency Overview

Color: black
Physical state: liquid
Form: viscous
Odor: acrylic-like

***Classification of the substance or mixture:**
GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Serious eye damage, Category 1, H318
Skin sensitisation, Category 1, H317
Carcinogenicity, Category 1B, H350
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: **Danger**

Hazard statements:

H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H350 : May cause cancer.
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:
P201 : Obtain special instructions before use.
P202 : Do not handle until all safety precautions have been read and understood.
P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
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.
P281 : Use personal protective equipment as required.

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.
P308 + P313 : IF exposed or concerned: Get medical advice/ attention.
P310 : Immediately call a POISON CENTER or doctor.
P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.
P363 : Wash contaminated clothing 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 severe irritation and injury to the mouth, throat and 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. May cause allergic respiratory reaction.
Prolonged or repeated exposure may cause: headache, drowsiness, nausea, weakness, (severity of effects depends on extent of exposure).

Medical conditions aggravated by overexposure:
Respiratory disease or diminished respiratory capacity. Asthma (Data for residual monomer that may be released during processing)

Other:
This product may release fume and/or vapor of variable composition depending on processing time and temperature. Possible release of traces of residual monomer. Isocyanates may cause acute irritation and/or sensitisation of the respiratory system leading to tightness of the chest, wheeziness and an asthmatic condition.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Wt/Wt	GHS Classification**
Acrylic ester	Proprietary*	>= 30 - < 60 %	H317, H318, H411
Acrylic Oligomer	Proprietary*	>= 10 - < 30 %	H317, H411
Acrylate monomer	Proprietary*	>= 10 - < 30 %	H318, H317, H411
Proprietary component	Proprietary*	>= 10 - < 30 %	Not classified
Crosslinking acrylate monomer	Proprietary*	>= 10 - < 30 %	H317, H411
Proprietary acrylate	Proprietary*	>= 5 - < 10 %	H311, H315, H319, H317
Proprietary salt	Proprietary*	>= 5 - < 10 %	H302, H319
Proprietary additive	Proprietary*	>= 1 - < 5 %	H317, H413
Oxirane, (phenoxymethyl)-	122-60-1	>= 0.1 - < 1 %	H302, H312, H332, H315, H317, H350, H341, H335, H412
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. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin:
In case of contact, immediately flush skin with soap and plenty of water. Get medical attention if symptoms occur. 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 immediately.

Ingestion:
If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both 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:
Amines
Carbon oxides
Hazardous organic compounds
Hydrogen cyanide
Isocyanates
Nitrogen oxides
Phosphorus oxides
Silicon oxides
Polymerization is exothermic and can degenerate into an uncontrolled reaction.

SECTION 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. Evacuate area of all unnecessary personnel. 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:
Do not breathe vapor or mist.
Do not get in eyes, on skin, or on clothing.
Do not taste or swallow.
Keep container tightly closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Emptied container retains vapor and product residue.
Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.
Viscous materials and those supplied as solids at room temperature may require heating to facilitate handling and transfer from their original containers. This product may be heated to a maximum of 50C/122F for up to 24 hours. Do NOT use localized heat sources such as band heaters or steam. Use hot boxes or hot rooms for heating or melting. Ensure air space (oxygen) is present during product heating/melting. Do not overheat--this may compromise product quality and/or result in an uncontrolled hazardous polymerization. This product should be consumed in its entirety after heating/melting. Avoid re-heating multiple times; this may cause product degradation. If this product freezes, heat it as specified above and mix gently to redistribute the inhibitor.

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:

Oxirane, (phenoxymethyl)- (122-60-1)

US. ACGIH Threshold Limit Values

Time weighted average	0.1 ppm
Skin designation	
Remarks:	Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL:	10 ppm (60 mg/m3)

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:
Do not breathe 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 a face shield, chemical goggles, and have eye flushing equipment immediately available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Color:	black
Physical state:	liquid
Form:	viscous
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:	2,000 CPS 77 °F (25 °C)
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 oxidizing agents
Strong reducing agents
Free radical generators
Inert gas
Oxygen scavenger.
Peroxides
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 :
Acrylates
Amines
Carbon oxides
Hazardous organic compounds
Hydrogen cyanide
Isocyanates
Nitrogen oxides
Phosphorus oxides
Silicon oxides

SECTION 11: TOXICOLOGICAL INFORMATION

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

Data for N3D-FR512

Acute toxicity

Oral:
Practically nontoxic. Acute toxicity estimate > 5,000 mg/kg.

Dermal:
May be harmful in contact with skin. Acute toxicity estimate = 4,611 mg/kg.

Data for Acrylic ester (Proprietary)

Acute toxicity

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

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

Eye Irritation:
Causes serious eye damage. (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): forestomach / signs: Local irritation / No adverse systemic effects reported.

Genotoxicity

Assessment in Vitro:
Genetic changes were observed in laboratory tests using: bacteria

Genotoxicity

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

Developmental toxicity
Reproductive/Developmental Effects Screening Assay. Oral (rat) / No birth defects were observed. (reduced body weight, at doses that produce effects in mothers)

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

Other information
Effects due to processing releases or residual monomer:
Possible cross sensitization with other acrylates and methacrylates.

Data for Acrylic 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:
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: bacteria, animal cells

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

Data for Acrylate monomer (Proprietary)

Acute toxicity

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

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

Eye Irritation:
Causes serious eye damage. (rabbit)

Not irritating. (In vitro)

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

Repeated dose toxicity
Repeated oral administration to rat / affected organ(s): Stomach / signs: Local effects due to an irritant effect / No adverse systemic effects reported.

Genotoxicity

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

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

Other information
Effects due to processing releases or residual monomer:
Possible cross sensitization with other acrylates and methacrylates.

Data for Proprietary component (Proprietary)

Acute toxicity

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

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

Skin Irritation:
Not irritating. (rabbit)

Eye Irritation:
Not irritating. (rabbit)

Skin Sensitization:
Not a sensitizer. Guinea pig maximization test. No skin allergy was observed.

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: 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) / No birth defects were observed.

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

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: bacteria, animal cells

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 Proprietary acrylate (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 Proprietary salt (Proprietary)

Acute toxicity

Oral:
Harmful if swallowed. (rat) LD50 > 300 - 2,000 mg/kg.

Inhalation:
May be harmful if inhaled. (rat) 4 h LC50 > 4.85 mg/l. (dust/mist)

Skin Irritation:
Not irritating. (In vitro) EPISKIN Human Skin Model Test

Eye Irritation:
Causes serious eye irritation. (rabbit)

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

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: 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 Oxirane, (phenoxymethyl)- (122-60-1)

Acute toxicity

Oral:
May be harmful if swallowed. (rat) LD50 = 2,600 mg/kg.

Harmful if swallowed. (mouse) LD50 = 1,400 mg/kg.

Dermal:
Harmful in contact with skin. (rabbit) LD50 = 1,666 mg/kg.

Inhalation:
Harmful if inhaled. (rat) 4 h LC50 = 1.98 mg/l. (dust/mist)

Specific target organ toxicity - single exposure:
May cause respiratory irritation.

Skin Irritation:
Causes skin irritation. (rabbit) (24 h) (occluded exposure)

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
Subchronic inhalation administration to rat / affected organ(s): skin / signs: Local irritation, hair loss / No adverse systemic effects reported. (vapor)

Carcinogenicity
Chronic inhalation administration to rat / affected organ(s): nasal cavity / Increased incidence of tumors was reported.
Classified by the International Agency for Research on Cancer as: Group 2B: Possibly carcinogenic to humans.

Genotoxicity

Assessment in Vitro:
Genetic changes were observed in laboratory tests using: bacteria

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

Genotoxicity

Assessment in Vivo:
Both positive and negative responses for genetic changes were observed in laboratory tests using: mice

No genetic changes were observed in laboratory tests using: rats

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

Reproductive effects
Two generation reproduction study. Inhalation (rat) / No toxicity to reproduction.

Other information
Can be absorbed through the skin.

Human experience
Skin contact:
Skin: Irritation, Skin allergy was observed. (repeated or prolonged exposure) (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 Acrylic ester (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 14.5 - 19.7 %

Octanol Water Partition Coefficient:
log Pow: = 1.09 - 2.61, at 77 °F (25 °C) pH = 6.8

Data for Acrylate monomer (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 35.1 %

Octanol Water Partition Coefficient:
log Pow: = 2.03, at 77 °F (25 °C) pH = 6.5

Data for Proprietary component (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 1 %

Data for Crosslinking acrylate monomer (Proprietary)

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

Octanol Water Partition Coefficient:
log Pow: = 3.58, at 77 °F (25 °C)

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 (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 Acrylic ester (Proprietary)

Aquatic toxicity data:
Toxic. Danio rerio (zebra fish) 96 h LC50 = 9.43 mg/l

Aquatic invertebrates:
Practically nontoxic. Daphnia magna (Water flea) 48 h EC50 = 158.3 mg/l

Algae:
Harmful. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 = 25.7 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 14 d NOEC >= 100 mg/l

Data for Acrylate monomer (Proprietary)

Aquatic invertebrates:
Harmful. Daphnia magna (Water flea) 48 h EC50 = 19.5 mg/l

Algae:
Toxic. Desmodesmus subspicatus (green algae) 72 h EC50 = 4.4 mg/l (similar material)

Chronic toxicity to aquatic plants:
Toxic. Desmodesmus subspicatus (green algae) 72 h EC10 = 0.71 mg/l (similar material)

Data for Proprietary component (Proprietary)

Aquatic toxicity data:
Practically nontoxic. Danio rerio (zebra fish) 96 h LC50 > 100 mg/l

Aquatic invertebrates:
Practically nontoxic. Daphnia magna (Water flea) 48 h EC50 > 100 mg/l

Algae:
Practically nontoxic. Desmodesmus subspicatus (green algae) 72 h EC50 > 180 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 3 h NOEC = 483 mg/l

Chronic toxicity to fish:
Practically nontoxic. Danio rerio (zebra fish) 28 d NOEC = 100 mg/l

Chronic toxicity to aquatic invertebrates:
Practically nontoxic. Reproduction Test / Daphnia magna (Water flea) 21 d NOEC = 10 mg/l (The value is calculated)

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. Raphidocelis subcapitata (freshwater green algae) 72 h ErC50 = 4.88 mg/l

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

Data for Proprietary salt (Proprietary)

The information presented is from representative materials in this chemical class. The results may vary depending on the test substance.

Aquatic toxicity data:
Practically nontoxic. Oncorhynchus mykiss (rainbow trout) 96 h LC50 > 100 mg/l (Nominal concentration)

Aquatic invertebrates:
Practically nontoxic. Daphnia magna (Water flea) 48 h EC50 > 100 mg/l (Nominal concentration)

Algae:
Harmful. Raphidocelis subcapitata (freshwater green algae) 72 h ErC50 > 97.1 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 3 h EC50 > 100 mg/l (Nominal concentration)

Chronic toxicity to aquatic plants:
Practically nontoxic. Raphidocelis subcapitata (freshwater green algae) 72 h NOEC r = 97.1 mg/l

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 (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	:	(Acrylic ester, Acrylic 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	:	(ACRYLIC ESTER, ACRYLIC 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)	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)	Not 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	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:
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Carcinogenicity
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.
Oxirane, (phenoxymethyl)-	122-60-1
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

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.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Latest Revision(s):

Reference number:	200026240
Date of Revision:	01/15/2025
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