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-PR184-BIO
Synonyms: Acrylic Resin
Molecular formula: Proprietary Mixture
Chemical family: acrylic resin
Product use: 3D printing

SECTION 2: HAZARDS IDENTIFICATION

Emergency Overview

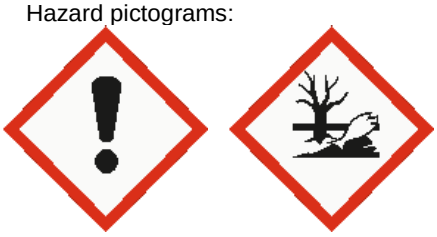
Color: gray
Physical state: liquid
Odor: acrylic-like

***Classification of the substance or mixture:**
GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Skin sensitisation, Category 1, H317
Acute aquatic toxicity, Category 1, H400
Chronic aquatic toxicity, Category 1, H410

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

GHS-Labelling

Hazard pictograms:



Signal word: **Warning**

Hazard statements:

H317 : May cause an allergic skin reaction.
H410 : Very 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.
P272 : Contaminated work clothing should not be allowed out of the workplace.
P273 : Avoid release to the environment.
P280 : Wear protective gloves.

Response:

P302 + P352 : IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.
P363 : Wash contaminated clothing before reuse.
P391 : Collect spillage.

Disposal:

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

Supplemental information:

Potential Health Effects:

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**
Acrylic ester	Proprietary*	>= 30 - < 60 %	H317, H411
Acrylated ester	Proprietary*	>= 30 - < 60 %	Not classified
Acrylate ester	Proprietary*	>= 10 - < 30 %	H317, H400, H410
Silane, dichlorodimethyl-, reaction products with silica (nanoform)	68611-44-9	>= 1 - <= 2 %	Not classified
Proprietary component	Proprietary*	>= 0.1 - < 1 %	H317, H413
Titanium oxide (TiO2)	13463-67-7	< 1 %	Not classified
2-Propenoic acid	79-10-7	>= 0.1 - < 1 %	H226, H302, H332, H314, H318, H335, H400, H411
Carbon black	1333-86-4	>= 0.1 - < 1 %	Not classified
Co-stabilizer	Proprietary*	>= 0.1 - < 1 %	H317, H400, H410

*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. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:
Immediately flush eye(s) with plenty of water.

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
Nitrogen oxides
Phosphorus oxides
Silicon oxides
sulfur oxides
Hazardous organic compounds
Metallic oxides
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 prolonged or repeated contact with skin.
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

Carbon black (1333-86-4)

US. ACGIH Threshold Limit Values

Form:	Inhalable fraction.
Time weighted average	3 mg/m3

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

PEL:	3.5 mg/m3

2-Propenoic acid (79-10-7)

US. ACGIH Threshold Limit Values

Time weighted average	2 ppm
Skin designation	
Remarks:	Can be absorbed through the skin.

Titanium oxide (TiO2) (13463-67-7)

US. ACGIH Threshold Limit Values

Form:	Respirable finescale particles
Time weighted average	2.5 mg/m3
Form:	Respirable nanoscale particles
Time weighted average	0.2 mg/m3

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

Form:	Total dust
PEL:	15 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)

Form:	Total dust
Time weighted average	15 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:	Respirable fraction.
Time weighted average	5 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:
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 eye contact may be likely, wear chemical goggles and have eye flushing equipment available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Color:	gray
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:	400 - 750 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 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 :
Carbon oxides
Acrylates
Nitrogen oxides
Phosphorus oxides
sulfur oxides
Silicon oxides
titanium oxides
Hazardous organic compounds

SECTION 11: TOXICOLOGICAL INFORMATION

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

Data for N3D-PR184-BIO

Acute toxicity

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

Data for Acrylic ester (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. (In vitro)

Eye Irritation:
Not irritating. (In vitro)

Skin Sensitization:
May cause allergic skin reaction. Guinea pig maximization test. 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

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

Data for Acrylated ester (Proprietary)

Acute toxicity

Oral:
No deaths occurred. (rat) LD0 = 5,000 mg/kg.

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

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

Eye Irritation:
Causes mild eye irritation. (rabbit)

Skin Sensitization:
Not a sensitizer. LLNA: Local Lymph Node Assay. (mouse) 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

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 ester (Proprietary)

Acute toxicity

Oral:
May be harmful if swallowed. (rat) LD50 = 4,350 mg/kg.

Dermal:
No deaths occurred. (rabbit) LD0 > 3,000 mg/kg.

Skin Irritation:
Not irritating. (rabbit) (24 h) (occluded exposure)

Eye Irritation:
Causes mild eye irritation. (rabbit)

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

Repeated dose toxicity
Repeated oral administration to rat / affected organ(s): Stomach, thymus / signs: Local irritation, changes in organ weights, atrophy

Genotoxicity

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

Developmental toxicity
Reproductive/Developmental Effects Screening Assay. Oral (rat) / No birth defects were observed. (increased mortality in the offspring, 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.

Human experience
Skin contact:
Skin: Dermatitis. No skin allergy was observed

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 component (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 Acrylic acid, propoxylated neopentylglycol ester (84170-74-1)

Acute toxicity

Oral:
No deaths occurred. (rat) LD0 = 5,000 mg/kg.

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

Inhalation:
No deaths occurred. (rat) 4 h LC0 = 2 mg/l. (dust/mist)

Skin Irritation:
Practically non-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)

May cause allergic skin reaction. LLNA: Local Lymph Node Assay. (mouse) 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

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
The information presented is from representative materials with this Chemical Abstract Service (CAS) Registry number. The results vary depending on the size and composition of the test substance.
Effects due to processing releases or residual monomer:
Possible cross sensitization with other acrylates and methacrylates.

Human experience
Skin contact:
Skin: blistering, dermatitis. Sensitization described in isolated cases. (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 28 %

Octanol Water Partition Coefficient:
log Pow: = 4.64

Data for Acrylated ester (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 51 %

Octanol Water Partition Coefficient:
log Pow: > 0.89 - 2.96

Data for Acrylate ester (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 43 %

Octanol Water Partition Coefficient:
log Pow: = 4.52, at 68 °F (20 °C)

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

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

Octanol Water Partition Coefficient:
log Pow: = 0.46

Data for Co-stabilizer (Proprietary)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation < 4 %

Bioaccumulation:
Moderate potential to bioaccumulate. calculated = 3.16

Octanol Water Partition Coefficient:
log Pow: = 14, at 77 °F (25 °C) pH = 7

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 = 1.65 mg/l

Aquatic invertebrates:
Toxic. Daphnia magna (Water flea) 48 h EC50 = 2.36 mg/l

Algae:
Toxic. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 = 1.6 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 28 d NOEC = 100 mg/l

Chronic toxicity to aquatic plants:
Toxic. Growth inhibition / Pseudokirchneriella subcapitata (green algae) 72 h ErC10 = 0.64 mg/l

Data for Acrylated ester (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 ErC50 > 100 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 3 h EC50 = 788 mg/l

Data for Acrylate ester (Proprietary)

Aquatic toxicity data:
Very toxic. Danio rerio (zebra fish) 96 h LC50 = 0.704 mg/l

Algae:
Toxic. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 = 1.98 mg/l

Chronic toxicity to aquatic invertebrates:
Very toxic. Reproduction Test / Daphnia magna (Water flea) 21 d NOEC = 0.09 mg/l

Chronic toxicity to aquatic plants:
Toxic. Pseudokirchneriella subcapitata (green algae) 72 h NOEC r = 0.405 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 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. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 = 0.13 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 30 min EC20 = 900 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. Growth inhibition / Desmodesmus subspicatus (green algae) 72 h ErC10 = 0.03 mg/l

Data for Co-stabilizer (Proprietary)

Aquatic toxicity data:
No effect up to the limit of solubility. Oncorhynchus mykiss (rainbow trout) 96 h LC50 > 100 mg/l (Nominal concentration, Water accommodated fraction was tested.)

Aquatic invertebrates:
Very toxic. Daphnia magna (Water flea) 48 h EC50 = 0.3 mg/l (Nominal concentration, Water accommodated fraction was tested.)

Algae:
Practically nontoxic. Scenedesmus subspicatus (green algae) 72 h EC50 >= 100 mg/l (Nominal concentration)

Microorganisms:
Respiration inhibition / Activated sludge 28 h EC50 > 15.4 mg/l

Chronic toxicity to aquatic invertebrates:
Very toxic. Reproduction Test / Daphnia magna (Water flea) 21 d NOEC = 0.1 mg/l (Nominal concentration Water accommodated fraction was tested.)

Chronic toxicity to aquatic plants:
No effect up to the limit of solubility. Growth inhibition / Raphidocelis subcapitata (freshwater green algae) 72 h NOEC > 100 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	:	(Acrylate ester, Acrylic ester)
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	:	(ACRYLATE ESTER, ACRYLIC ESTER)
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	All components of this product are on the Canadian DSL
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)	Not all components of this product are listed or exempted
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	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:
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.
Titanium oxide (TiO2)	13463-67-7
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.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
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.

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