

SR444**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: SR444
Synonyms: PENTAERYTHRITOL TRIACRYLATE
Molecular formula: mixture
Chemical family: Mixture
Product use: elastomers, Inks, Adhesives and/or sealants, Coatings

2. HAZARDS IDENTIFICATION**Emergency Overview**

Color: Clear - colourless
Physical state: liquid
Odor: musty

***Classification of the substance or mixture:**

Oral: Acute toxicity, Category 4, H302
Skin irritation, Category 2, H315
Serious eye damage, Category 1, H318
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.

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GHS-Labeling

Hazard pictograms:



Signal word:

Danger

Hazard statements:

- H302 : Harmful if swallowed.
- H315 : Causes skin irritation.
- H317 : May cause an allergic skin reaction.
- H318 : Causes serious eye damage.
- 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.
- P270 : Do not eat, drink or smoke when using this product.
- 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.

Response:

- P301 + P312 : IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
- 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.
- P310 : Immediately call a POISON CENTER or doctor.
- P330 : Rinse mouth.
- P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.
- P362 : Take off contaminated clothing and wash before reuse.
- P391 : Collect spillage.

Disposal:

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

Supplemental information:

Product code: FP01126-P

Version 1.4

Issued on: 03/27/2019

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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.

Prolonged or repeated exposure may cause: headache, nausea, drowsiness, weakness, (severity of effects depends on extent of exposure).

Other:

This product may release fume and/or vapor of variable composition depending on processing time and temperature.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS-No. | Wt/Wt | GHS Classification** |
|---|------------|----------------|------------------------------------|
| 2-Propenoic acid, 2,2-bis[[1-(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester | 4986-89-4 | >= 30 - < 60 % | H302, H315, H319, H317, H411 |
| 2-Propenoic acid, 2-(hydroxymethyl)-2-[[1-(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester | 3524-68-3 | >= 10 - < 30 % | H302, H315, H318, H317, H401, H411 |
| 2-Propenoic acid, 2-ethyl-2-[[1-(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester | 15625-89-5 | >= 10 - < 30 % | H315, H319, H317, H400, H410 |

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

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.

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Skin:

In case of contact, immediately flush skin with 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 immediately.

Ingestion:

If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. Rinse mouth.

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 immediate medical attention and special treatment needed, if necessary:

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

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

Polymerization is exothermic and can degenerate into an uncontrolled reaction.

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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.

7. HANDLING AND STORAGE**Handling****General information on handling:**

Do not taste or swallow.
Do not get in eyes, on skin, or on clothing.
Do not breathe vapor or mist.
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 60C/140F 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.

This product tends to crystallize at or near room temperature. If product has crystallized, follow heating instructions above.

Storage incompatibility – General:

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Store separate from:
Strong oxidizing agents
Strong reducing agents
Free radical generators
Inert gas
Oxygen scavenger.
Peroxides

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

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Airborne Exposure Guidelines:****2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester (3524-68-3)**

US. OARS. WEELs Workplace Environmental Exposure Level Guide

Time weighted average 0.082 ppm (1 mg/m³)

Remarks: Listed

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

Skin designation
Remarks: Can be absorbed through the skin.

Time weighted average 1 mg/m³
Remarks: Avoid skin or eye contact with liquids or aerosols.

Remarks: Listed

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.

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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.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|--|
| Color: | Clear - colourless |
| Physical state: | liquid |
| Odor: | musty |
| Odor threshold: | No data available |
| Flash point | > 201 °F (94 °C) (Pensky-Martens closed cup) |
| Auto-ignition temperature: | No data available. |
| Lower flammable limit (LFL): | No data available |
| Upper flammable limit (UFL): | No data available |
| pH: | ~ 7 |
| Density: | 1.162 g/cm ³ (77 °F (25 °C)) |
| Specific Gravity (Relative density): | 1.162 (77 °F(25 °C))Water=1 (liquid) |

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| | |
|---|---|
| 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: | negligible |
| Viscosity, dynamic: | 520 mPa.s 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 |

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

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
Hazardous organic compounds

11. TOXICOLOGICAL INFORMATION

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

Oral:

Acute toxicity estimate 701.76 mg/kg.

Data for 2-Propenoic acid, 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-1,3- propanediyl ester (4986-89-4)**Acute toxicity****Oral:**

Harmful if swallowed. (rat) LD50 = 540 mg/kg. (tested in a mixture with similar substance(s))

Skin Irritation:

Causes skin irritation. (rabbit) (24 h) (tested in a mixture with similar substance(s))

Causes skin irritation. (rabbit) (24 h) (Repeated skin exposure, tested in a mixture with similar substance(s))

Eye Irritation:

Causes serious eye damage. (rabbit) (tested in a mixture with similar substance(s))

Skin Sensitization:

May cause an allergic skin reaction. Guinea pig maximization test. Weak skin sensitizer

Repeated dose toxicity

Repeated oral administration to rat / affected organ(s): Stomach / signs: tissue damage, irritation, inflammation, hyperplasia / (tested in a mixture with similar substance(s))

Reproductive effects

Reproductive/Developmental Effects Screening Assay. Oral (rat) / No toxicity to reproduction / (tested in a mixture with similar substance(s))

Other information

Possible cross sensitization with other acrylates and methacrylates.

Human experience**Skin contact:**

Skin allergy was observed. Isolated case reports after exposure to a mixture containing this substance.

Data for 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester (3524-68-3)**Acute toxicity****Oral:**

Harmful if swallowed. (rat) LD50 = 836.8 - 1,350 mg/kg. (tested in a mixture with similar substance(s))

Dermal:

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

Skin Irritation:

Causes skin irritation. (rabbit) (24 h) (tested in a mixture with similar substance(s))

Causes severe skin burns. (rabbit) (24 h) (occluded exposure, tested in a mixture with similar

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substance(s))

Eye Irritation:

Causes serious eye damage. (rabbit) (tested in a mixture with similar substance(s))

Skin Sensitization:

May cause allergic skin reaction. Guinea pig maximization test. Skin allergy was observed. (Strong sensitizer, tested in a mixture with similar substance(s))

Repeated dose toxicity

Repeated dermal administration to rat and mouse / affected organ(s): Skin / signs: Hyperplasia, inflammation / (tested in a mixture with similar substance(s))

Subchronic dermal administration to mouse / affected organ(s): kidney, testes / signs: tissue damage, changes in organ structure or function, atrophy / (tested in a mixture with similar substance(s))

Repeated oral administration to rat / affected organ(s): Stomach, adrenal gland, thymus / signs: tissue damage, irritation, inflammation, hyperplasia / (tested in a mixture with similar substance(s))

Carcinogenicity

Six months dermal administration to Transgenic Activated (Tg.Ac) hemizygous mouse / affected organ(s): skin / Increased incidence of tumors was reported. (tested in a mixture with similar substance(s))

Genotoxicity**Assessment in Vitro:**

No genetic changes were observed in laboratory tests using: bacteria, tested in a mixture with similar substance(s)

Genotoxicity**Assessment in Vivo:**

No genetic changes were observed in a laboratory test using: mice, tested in a mixture with similar substance(s)

Developmental toxicity

Exposure during pregnancy. Oral (rat and rabbit) / No effects on foetal development (tested in a mixture with similar substance(s))

Exposure during pregnancy. Oral (rat) / Equivocal response. (at doses that produce effects in mothers, tested in a mixture with similar substance(s))

Reproductive effects

Reproductive/Developmental Effects Screening Assay. Oral (rat) / No toxicity to reproduction. / (tested in a mixture with similar substance(s))

Other information

Heating can cause decomposition and liberate toxic gas.

Possible cross sensitization with other acrylates and methacrylates

Human experience**Skin contact:**

Allergic reactions, irritation, dermatitis. Possible cross sensitization with other acrylates and methacrylates (liquid or aerosol)

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Human experience**Eye contact:**

Reported irritation of conjunctiva. (liquid or aerosol)

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

No deaths occurred. (rat) LD₀ > 5,000 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 mild skin irritation. (rabbit) Irritation Index: 2.2 - 3.8 / 8. (4 h)

Causes skin irritation. (rabbit) (6 h) (Repeated skin exposure)

Eye Irritation:

Causes serious eye irritation. (rabbit) Irritation Index: 44/110.

Skin Sensitization:

May cause an allergic skin reaction. Repeated skin exposure. (guinea pig) 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 rat, mouse, rabbit / affected organ(s): skin / signs: Local irritation / No adverse systemic effects reported.

Genotoxicity**Assessment in Vitro:**

Both positive and equivocal responses have been reported in tests using: bacteria

Genetic changes were observed in laboratory tests using: 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.

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Human experience**Skin contact:**

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

12. ECOLOGICAL INFORMATION**Chemical Fate and Pathway**

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

Data for 2-Propenoic acid, 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-1,3- propanediyl ester (4986-89-4)**Biodegradation:**

Not readily biodegradable. (28 d) biodegradation 6 - 14 % / present as a component of the test mixture

Octanol Water Partition Coefficient:

log Pow: 1.4 - 2.2

Data for 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester (3524-68-3)**Biodegradation:**

Not readily biodegradable. (28 d) biodegradation 6 - 14 % / present as a component of the test mixture

Octanol Water Partition Coefficient:

log Pow: = 1.45 - 2.71

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

Ecotoxicology

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

Data for 2-Propenoic acid, 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-1,3- propanediyl ester (4986-89-4)**Aquatic toxicity data:**

Toxic. Cyprinus carpio (Carp) 96 h LC50 3.2 mg/l (present as a component of the test mixture)

Aquatic invertebrates:

Harmful. Daphnia magna (Water flea) 48 h EC50 = 13 mg/l (present as a component of the test mixture)

Algae:

Harmful. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 = 12 mg/l (present as a component of the test mixture)

Data for 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester (3524-68-3)

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Aquatic toxicity data:

Toxic. carp 96 h LC50 = 3.2 mg/l (present as a component of the test mixture)

Aquatic invertebrates:

Harmful. Daphnia magna (Water flea) 48 h EC50 = 13 mg/l (present as a component of the test mixture)

Algae:

Harmful. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 = 12 mg/l (present as a component of the test mixture)

Chronic toxicity to aquatic plants:

Toxic. Pseudokirchneriella subcapitata (green algae) 96 h NOEC (Growth inhibition) = 0.31 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

Toxic. Leuciscus idus (Golden orfe) 96 h LL50 = 1.47 mg/l

Aquatic invertebrates:

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

Algae:

Toxic. Desmodesmus subspicatus (green algae) 96 h EC50 = 4.86 mg/l

Microorganisms:

Activated sludge 30 min EC20 (Respiration inhibition) = 625 mg/l

Chronic toxicity to aquatic plants:

Practically nontoxic. Desmodesmus subspicatus (green algae) 72 h EC10 = 1.9 mg/l

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.

14. TRANSPORT INFORMATION**US Department of Transportation (DOT)**

| | | |
|-----------------------------|---|--|
| UN Number | : | 3082 |
| Proper shipping name | : | Environmentally hazardous substance, liquid, n.o.s. |
| Technical name | : | (Pentaerythritol tetraacrylate, Pentaerythritol triacrylate) |
| Class | : | 9 |
| Packaging group | : | III |

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Marine pollutant : yes

International Maritime Dangerous Goods Code (IMDG)

UN Number : 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name : (PENTAERYTHRITOL TETRAACRYLATE, PENTAERYTHRITOL TRIACRYLATE)
Class : 9
Packaging group : III
Marine pollutant : yes
Flash point : > 201 °F (94 °C) Pensky-Martens closed cup

15. REGULATORY INFORMATION

Chemical Inventory Status

| | | |
|--|------------|---|
| US. Toxic Substances Control Act | TSCA | The components of this product are all on the 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) | Conforms to |
| Japan. ENCS - Existing and New Chemical Substances Inventory | ENCS (JP) | Conforms to |
| Japan. ISHL - Inventory of Chemical Substances | ISHL (JP) | Conforms to |
| Korea. Korean Existing Chemicals Inventory (KECI) | KECI (KR) | Conforms to |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | PICCS (PH) | Conforms to |
| Australia Inventory of Chemical Substances (AICS) | AICS | Conforms to |

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:

Reactivity Hazard, Acute Health Hazard

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.

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

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

United States – State Regulations

New Jersey Right to Know

No components are subject to the New Jersey Right to Know Act.

Pennsylvania Right to Know

| <u>Chemical name</u> | <u>CAS-No.</u> |
|--|----------------|
| 2-Propenoic acid, 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester | 4986-89-4 |
| 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester | 3524-68-3 |
| 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester | 15625-89-5 |
| 2-Propenoic acid | 79-10-7 |
| Benzene, methyl- | 108-88-3 |

Pennsylvania Right to Know – Environmentally Hazardous Substance(s)

| <u>Chemical name</u> | <u>CAS-No.</u> |
|----------------------|----------------|
| 2-Propenoic acid | 79-10-7 |
| Benzene, methyl- | 108-88-3 |

California Prop. 65

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

| <u>Chemical name</u> | <u>CAS-No.</u> |
|----------------------|----------------|
| Benzene, methyl- | 108-88-3 |

16. OTHER INFORMATION

SR444**Full text of H-Statements referred to under sections 2 and 3.**

| | |
|------|---|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H400 | Very toxic to aquatic life. |
| H401 | Toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

Latest Revision(s):

| | |
|-------------------|------------|
| Reference number: | 200004216 |
| Date of Revision: | 03/27/2019 |
| Date Printed: | 03/28/2019 |

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It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.