



SAFETY DATA SHEET

SARET® SR516

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: SARET® SR516
Synonyms: SARET® CROSSLINKING AGENT
Molecular formula: Proprietary mixture
Chemical family: Mixture
Product use: Plastic materials, Sealant, Rubber products

2. HAZARDS IDENTIFICATION**Emergency Overview**

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

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

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-Labeling

Hazard pictograms:



Signal word:

Warning**Hazard statements:**

H317 : May cause an allergic skin reaction.
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 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/ container to an approved waste disposal plant.

Supplemental information:**Potential Health Effects:**

Effects due to processing releases: Irritating to eyes, respiratory system and skin. Possible cross sensitization with other acrylates and methacrylates.
Prolonged or repeated exposure may cause: headache, drowsiness, nausea, weakness, (severity of effects depends on extent of exposure).

Other:

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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**
Difunctional methacrylic ester	Proprietary*	> 95 - <= 100 %	H317
2,6-di-tert-butyl-alpha-dimethylamino-p-cresol	88-27-7	> 1 - <= 5 %	H303, H319, 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.

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) 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.

SARET® SR516**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.

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.

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

Avoid breathing processing 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.



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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 12 months.

Storage incompatibility – General:

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:****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 processing 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.

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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.

9. PHYSICAL AND CHEMICAL PROPERTIES
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Color:	yellow
Physical state:	liquid
Odor:	acrylic-like
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:	1.01 g/cm ³ (77 °F (25 °C))
Specific Gravity (Relative density):	1.01 (77 °F(25 °C))Water=1 (liquid)
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:	negligible
Refractive index:	1.4534 77 °F (25 °C)

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Viscosity, dynamic:	5 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

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
Methacrylates
Hazardous organic compounds

11. TOXICOLOGICAL INFORMATION

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

Oral:

Acute toxicity estimate > 5,000 mg/kg.

Data for Difunctional methacrylic ester (Proprietary)

Acute toxicity

Oral:

Practically nontoxic. (rat) LD50 = 14,600 mg/kg.

SARET® SR516**Dermal:**

May be harmful in contact with skin. (rabbit) LD50 > 3,000 mg/kg.

Inhalation:

No deaths occurred. (mouse) 4 h LD0 > 0.89 mg/l.

Skin Irritation:

Practically non-irritating. (rabbit) Irritation Index: < 1; MAX = 8. (24 h)

Eye Irritation:

Not irritating. (rabbit) Irritation Index: 0.

Skin Sensitization:

May cause an allergic skin reaction. LLNA: Local Lymph Node Assay. (mouse) Produced an allergic reaction. (similar material)

Repeated dose toxicity

Repeated oral administration to rat / affected organ(s): stomach, liver / signs: reduced body weight, changes in food or water consumption / (data for a similar material)

Chronic dermal administration to mouse / affected organ(s): kidney / signs: increased mortality / (data for a similar material)

Genotoxicity**Assessment in Vitro:**

No genetic changes were observed in laboratory tests using: bacteria, data for a similar material

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

Genotoxicity**Assessment in Vivo:**

No genetic changes were observed in laboratory tests using: rats, mice, data for similar material

Developmental toxicity

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

Reproductive effects

Reproductive/Developmental Effects Screening Assay. Oral (rat) / Reduced fertility / (toxic effects also observed in the parental animals at these doses, data for a similar material)

Other information

Possible cross sensitization with other acrylates and methacrylates.

Human experience**Skin contact:**

Skin: Allergic reactions. Sensitization described in isolated cases.

Data for 2,6-di-tert-butyl-alpha-dimethylamino-p-cresol (88-27-7)

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Acute toxicity**Oral:**

Harmful if swallowed. (rat) LD50 = 461 mg/kg.

Dermal:

May be harmful in contact with skin. (rabbit) LD50 > 4.000 mg/kg. (occluded exposure)

Skin Irritation:

Practically non-irritating (rabbit) (4 h) (occluded exposure)

Eye Irritation:

Causes serious eye irritation. (rabbit)

Skin Sensitization:

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

Genotoxicity**Assessment in Vitro:**

No genetic changes were observed in laboratory tests using: animal cells

Genotoxicity**Assessment in Vivo:**

No genetic changes were observed in a laboratory test using: mouse

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway

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

Data for Difunctional methacrylic ester (Proprietary)**Biodegradation:**

Inherently biodegradable. (28 d) biodegradation 74 % / The 10 day time window criterion is not fulfilled.

Octanol Water Partition Coefficient:

log Pow 2.5

Data for 2,6-di-tert-butyl-alpha-dimethylamino-p-cresol (88-27-7)**Biodegradation:**

Not readily biodegradable. / calculated

Octanol Water Partition Coefficient:

log Pow 4.24 (calculated)

Ecotoxicology

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

Data for Difunctional methacrylic ester (Proprietary)

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Aquatic toxicity data:

Harmful to fish. *Leuciscus idus* (Golden orfe) 48 h EC50 32.5 mg/l

Algae:

Toxic to algae. *Desmodesmus subspicatus* (green algae) 72 h EC50 (growth rate) 9.8 mg/l (similar material)

Microorganisms:

Pseudomonas putida 16 h EC10 > 512 mg/l

Chronic toxicity to aquatic invertebrates:

Daphnia magna (Water flea) 21 d NOEC 5.1 mg/l (similar material)

Data for 2,6-di-tert-butyl-alpha-dimethylamino-p-cresol (88-27-7)**Aquatic toxicity data:**

Very toxic. Fish 96 h LC50 = 0.907 - 2.092 mg/l (calculated)

Aquatic invertebrates:

Very toxic. *Daphnia magna* (Water flea) 48 h LC50 = 0.335 - 0.746 mg/l (calculated)

Algae:

Very toxic. 96 h EC50 = 0.297 - 2.76 mg/l (calculated)

Microorganisms:

Activated sludge 3 h IC50 (Respiration inhibition) > 100 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 : (2,6-di-tert-butyl-alpha-dimethylamino-p-cresol)
 Class : 9
 Packaging group : III
 Marine pollutant : yes

International Maritime Dangerous Goods Code (IMDG)

UN Number : 3082



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Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name : (2,6-DI-TERT-BUTYL-A-DIMETHYLAMINO-P-CRESOL)
Class : 9
Packaging group : III
Marine pollutant : yes
Flash point : > 201 °F (94 °C) Pensky-Martens closed cup

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS	EINECS	Conforms to
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.

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

Product code: FP01947-P

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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>
Difunctional methacrylic ester	Proprietary
2,6-di-tert-butyl-alpha-dimethylamino-p-cresol	88-27-7
Benzene, methyl-	108-88-3

Pennsylvania Right to Know – Environmentally Hazardous Substance(s)

<u>Chemical name</u>	<u>CAS-No.</u>
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

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

H303	May be harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye 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.

Latest Revision(s):

Reference number:	200004470
Date of Revision:	11/14/2016
Date Printed:	11/14/2016

SARET® is a registered trademark of Arkema Inc.

Product code: FP01947-P

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The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, ARKEMA expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; **NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN.** The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement. See SDS for Health & Safety Considerations.

Arkema has implemented a Medical Policy regarding the use of Arkema products in Medical Devices applications that are in contact with the body or circulating bodily fluids (<http://www.arkema.com/en/social-responsibility/responsible-product-management/medical-device-policy/index.html>) Arkema has designated Medical grades to be used for such Medical Device applications. Products that have not been designated as Medical grades are not authorized by Arkema for use in Medical Device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices, and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices.

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.

