

# **HT511-SLA**

## 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: HT511-SLA Synonyms: Mixture

Molecular formula: Proprietary Mixture
Chemical family: acrylic-like

Product use: 3D printing resins

## **SECTION 2: HAZARDS IDENTIFICATION**

## **Emergency Overview**

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

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

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.



# **HT511-SLA**

### **GHS-Labelling**

Hazard pictograms:







Signal word: Danger

# **Hazard statements:**

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.

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:

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.

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:**

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:



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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**
Crosslinking acrylate monomer	Proprietary*	>= 30 - < 60 %	H317, H411
Trifunctional acrylate monomer	Proprietary*	>= 10 - < 30 %	H318, H317, H412
Polyether urethane diacrylate	Proprietary*	>= 10 - < 30 %	Not classified
Acrylic ester	Proprietary*	>= 5 - < 10 %	H311, H319, H315, H317

<sup>\*</sup>The specific chemical identity is withheld because it is trade secret information of Arkema Inc.

# **SECTION 4: FIRST AID MEASURES**

<sup>\*\*</sup>For the full text of the H-Statements mentioned in this Section, see Section 16.



# **HT511-SLA**

### 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. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. 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:



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When burned, the following hazardous products of combustion can occur:
Carbon oxides
Hazardous organic compounds
Amines
Isocyanates
hydrogen cyanide
Nitrogen oxides (NOx)
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 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.

## **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.



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### 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)

#### SECTION 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:

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



# **HT511-SLA**

equipment immediately available.

# **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Color: black

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: 600 mPa.s 77 °F (25 °C)

Oil/water partition

coefficient:

No data available.

Thermal decomposition: No data available.



# **HT511-SLA**

Flammability: See GHS Classification in Section 2 if applicable

# **SECTION 10: STABILITY AND REACTIVITY**

#### Stability

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

### Hazardous reactions:

Hazardous polymerisation may occur.

Polymerization is exothermic and can degenerate into an uncontrolled reaction.

#### Materials to avoid:

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

## 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

Amines

Nitrogen oxides (NOx)

Isocyanates

Hazardous organic compounds

Hydrogen cyanide

## **SECTION 11: TOXICOLOGICAL INFORMATION**

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

## Data for HT511-SLA

# **Acute toxicity**

#### Dermal:

May be harmful in contact with skin. Acute toxicity estimate = 3,859 mg/kg.

# Data for Crosslinking acrylate monomer (Proprietary)

### **Acute toxicity**



# **HT511-SLA**

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. (Bovine cornea)

Skin Sensitization:

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

Repeated dose toxicity

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

### Genotoxicity

### Assessment in Vitro:

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

#### **Developmental toxicity**

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

# Reproductive effects

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

# Data for Trifunctional 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)

**Skin Sensitization:** 

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

Genotoxicity

Assessment in Vitro:

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

Other information



# **HT511-SLA**

Possible cross sensitization with other acrylates and methacrylates.

#### Data for Polyether urethane diacrylate (Proprietary)

## **Acute toxicity**

#### Oral:

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

### Genotoxicity

#### Assessment in Vitro:

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

## Other information

The information presented is from representative materials in this chemical class. The results may vary depending on the test substance. Effects due to processing releases or residual monomer: Possible cross sensitization with other acrylates and methacrylates

### **Data for Acrylic ester (Proprietary)**

## **Acute toxicity**

#### Oral:

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

### Dermal:

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

#### **Skin Irritation:**

Causes skin irritation. (rabbit) Draize Test signs: Skin irritation

### Eye Irritation:

Causes serious eye irritation. (rabbit) signs: Eye irritation

### 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

# **SECTION 12: ECOLOGICAL INFORMATION**

# **Chemical Fate and Pathway**



# **HT511-SLA**

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

### Data for Crosslinking acrylate monomer (Proprietary)

## **Biodegradation:**

Not readily biodegradable. (28 d) biodegradation 43.5 %

#### **Octanol Water Partition Coefficient:**

log Pow: = 3.58

## Data for Trifunctional acrylate monomer (Proprietary)

#### Stability in water:

Half-life 1 y (@pH 4)

Half-life 128 h (@pH 9)

Half-life 194 d (@pH 7)

# **Biodegradation:**

Not readily biodegradable. biodegradation 14.5 - 19.7 %

### **Mobility and Distribution in the Environment:**

Log Koc = 1.3 - 5.0

# **Ecotoxicology**

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

## Data for Crosslinking acrylate monomer (Proprietary)

## Aquatic toxicity data:

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

### Aquatic invertebrates:

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

## Algae:

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

### Microorganisms:

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

## Data for Trifunctional acrylate monomer (Proprietary)

# 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



# **HT511-SLA**

## **SECTION 13: DISPOSAL CONSIDERATIONS**

### Waste disposal:

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

Take appropriate measures to prevent release to the environment.

## **SECTION 14: TRANSPORT INFORMATION**

### **US Department of Transportation (DOT)**

UN Number : 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

**Technical name** : (Crosslinking acrylate monomer)

Class : 9
Packaging group : III
Marine pollutant : yes

### International Maritime Dangerous Goods Code (IMDG)

**UN Number** : 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Technical name : (CROSSLINKING ACRYLATE MONOMER)

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 IECSC (CN) Conforms to

China (IECSC)



# **HT511-SLA**

Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Does not conform
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Does not conform
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	Does not conform
Australia Inventory of Chemical Substances (AICS)	AICS	Does not conform

### **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):

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**



# **HT511-SLA**

## **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>

Crosslinking acrylate monomer

<u>CAS-No.</u>

Proprietary

Trifunctional acrylate monomer Proprietary

Polyether urethane diacrylate Proprietary

Acrylic ester Proprietary

2-Propenoic acid 79-10-7

2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6

Benzene, methyl-

## Pennsylvania Right to Know - Environmentally Hazardous Substance(s)

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

2-Propenoic acid 79-10-7
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6
Benzene, methyl- 108-88-3

California Prop. 65

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

Chemical nameCAS-No.Carbon black1333-86-4

California Prop. 65

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

Chemical nameCAS-No.Benzene, methyl-108-88-3



# **HT511-SLA**

### **SECTION 16: OTHER INFORMATION**

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

- H311 Toxic in contact with skin. H315 Causes skin irritation.
- H317 May cause an allergic skin reaction. H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.
  H412 Harmful to aquatic life with long lasting effects.

### Latest Revision(s):

 Reference number:
 200020079

 Date of Revision:
 10/22/2021

 Date Printed:
 10/23/2021

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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.