



1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
900 First Avenue
King of Prussia, Pennsylvania 19406

Acrylic Monomers

Customer Service Telephone Number: 1-800-338-1015
(Monday through Friday, 8:30 AM to 5:30 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: NORSOCRYL® 500
Synonyms: None
Molecular formula: C₈H₁₀O₃
Chemical family: organic acids
Molecular weight: 154.18 g/mol
Product use: Organic intermediate

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: colourless
Physical state: liquid
Odor: pungent

DANGER!
CAUSES EYE AND SKIN BURNS.
MAY CAUSE BLINDNESS.
CAUSES RESPIRATORY TRACT IRRITATION.
MAY BE FATAL IF SWALLOWED.

Potential Health Effects

Primary routes of exposure:
Inhalation and skin contact.

Signs and symptoms of acute exposure:
Corrosive to skin and eyes. Causes burns. Irritating to respiratory system.

Skin:
Severely irritating to corrosive.

Inhalation:



No more than slightly toxic. (based on animal studies)

Eyes:

Severely irritating to corrosive.

Ingestion:

Slightly toxic. (based on animal studies)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	OSHA Hazardous
2-Propenoic acid, 2-methyl-, anhydride	760-93-0	> 92 %	Y
Phenol, 2-(1,1-dimethylethyl)-4,6-dimethyl-	1879-09-0	> 0.15 - < 0.25 %	Y

This material is classified as hazardous under Federal OSHA regulation.

The substance(s) marked with a "Y" in the Hazard column above, are those identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

4. 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 plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. 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.

5. FIRE-FIGHTING MEASURES

Flash point	203 °F (95 °C)
Auto-ignition temperature:	not determined
Lower flammable limit (LFL):	Not determined
Upper flammable limit (UFL):	Not determined
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.

Explosion hazard

Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:

A large amount of heat can be generated when monomers are exposed to a fire.

Heated sealed containers can explode.

When burned, the following hazardous products of combustion can occur:

Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

In case of spill or leak:

Stop the leak if you can do so without risk. Extinguish sources of ignition nearby and downwind. Ventilate the area. Wear suitable personal protective clothing and equipment. Dike spillage. Do not allow to enter drains or waterways. Use only non-sparking tools. Collect the remainder of the spill with absorbent material and place in drum approved for waste disposal or recovery. 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.

7. HANDLING AND STORAGE

Handling

General information on handling:

Do not taste or swallow.

Do not get in eyes, on skin, or on clothing.

Avoid breathing 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:

This product should be stored in a closed container, away from direct sunlight, at ambient temperatures. Storage of this product above the maximum temperature tolerance reduces the shelf life. An air space is required above the liquid in all containers; avoid storage under an oxygen-free atmosphere.

Storage stability – Temperature:–

< 86 °F (< 30 °C)

Storage stability – Remarks:



The typical shelf-life for this product is 12 months. The stability of this product should be checked periodically; typically every 90 days for bulk containers. Materials recommended for packaging include: stainless steel, aluminum, glass, HDPE, PP or PTFE.

Storage incompatibility – General:

Store away from sources of heat and light.

Storage incompatibility – Segregation (specific):

Free radical generators
Peroxides

Temperature tolerance – Do not store above:

86 °F (30 °C)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Engineering controls:

Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to control exposure levels below airborne exposure limits (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. 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: colourless



Physical state:	liquid
Odor:	pungent
pH:	not determined
Density:	not determined
Specific Gravity (Relative density):	1.042 (68 °F (20 °C))
Vapor pressure:	< 0.998 mmHg (68 °F (20 °C))
Vapor density:	(68 °F (20 °C))
Boiling point/boiling range:	408 °F (209 °C)
Melting point/range:	not determined
Freezing point:	-24 °F (-31 °C)
Solubility in water:	hydrolyses
Refractive index:	1.458 77 °F (25 °C)
Viscosity, dynamic:	2.1 - 2.3 mPa.s 68 °F (20 °C)
Molecular weight:	154.18 g/mol

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. See HANDLING AND STORAGE section of this MSDS for specified conditions.

Materials to avoid:

Free radical generators
Peroxides
Contamination

Conditions / hazards to avoid:

An uncontrolled polymerization may produce a rapid release of energy with the potential for an explosion of unvented closed containers or inadequately vented containers. This material polymerizes exothermically in the presence of heat, contamination, oxygen free atmosphere, free radicals, peroxides and inhibitor depletion liberating heat.

Hazardous decomposition products:

Thermal decomposition giving toxic products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

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

Data for 2-Propenoic acid, 2-methyl-, anhydride (760-93-0)

Acute toxicity

Oral:

Slightly toxic. (rat) LD50 = 1,500 mg/kg.

Inhalation:

No more than slightly toxic. (rat) 4 h LC50 > 2.1 mg/l.

Skin Irritation:

Moderately to severely irritating. (rabbit) Irritation Index: 4.8/8. (4 h)

Eye Irritation:

Severely irritating to corrosive. (rabbit) Irritation Index: 67/110.

Human experience

Eye contact:

Eyes: Severe irritation. May cause burns. May cause permanent eye injury.

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway

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

Data for 2-Propenoic acid, 2-methyl-, anhydride (760-93-0)

Biodegradation:

Readily biodegradable. (28 d) biodegradation 86 %

Data for 2-Propenoic acid, 2-methyl- (79-41-4)

Octanol Water Partition Coefficient:

log Pow = 0.93

Ecotoxicology

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

Data for 2-Propenoic acid, 2-methyl-, anhydride (760-93-0)

Aquatic toxicity data:

Slightly toxic. Oncorhynchus mykiss (rainbow trout) 96 h LC50 85 mg/l

Aquatic invertebrates:

Practically nontoxic. Daphnia magna (Water flea) 48 h EC50 > 130 mg/l

Algae:

Slightly toxic. Pseudokirchneriella subcapitata 72 h EC50 (growth rate) 45 mg/l

Slightly toxic. Pseudokirchneriella subcapitata 72 h EC50 (biomass) 20 mg/l

**Chronic toxicity to aquatic invertebrates:**

Reproduction & survival test. / Daphnia magna (Water flea) 21 d EC50 (Reproduction inhibition) 70 mg/l

Reproduction & survival test. / Daphnia magna (Water flea) 21 d EC50 (Immobilization) 70 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.

14. TRANSPORT INFORMATION**International Maritime Dangerous Goods Code (IMDG)**

UN Number	:	3265
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name	:	(METHACRYLIC ANHYDRIDE)
Class	:	8
Packaging group	:	III
Marine pollutant	:	no
Flash point	:	203 °F (95 °C)

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.
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	Does not conform
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 144)	DSL	This product contains one or several components listed in the Canadian NDSL list. All other components are on the DSL list.
Japan. Kashin-Hou Law List	ENCS (JP)	Conforms to
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	Does not conform
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	Does not conform



Material Safety Data Sheet

NORSOCRYL® 500

China. Inventory of Existing Chemical Substances IECSC (CN) Conforms to

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand NZIOC Conforms to

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>SARA Reportable Quantities</u>	<u>SARA Threshold Planning Quantity</u>
2-Propenoic acid, 2-methyl-, anhydride	760-93-0	500 lbs	500 lbs

SARA Title III - Section 311/312 Hazard Categories:

Acute Health Hazard, Reactivity Hazard

SARA Title III – Section 313 Toxic Chemicals:

SARA 313: 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):

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Reportable quantity</u>
Acetic acid, anhydride	108-24-7	5000 lbs

OSHA Regulated Carcinogens (NTP, IARC, OSHA Listed):

NTP:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC:

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

United States – State Regulations



New Jersey Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
2-Propenoic acid, 2-methyl-, anhydride	760-93-0

Pennsylvania Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
2-Propenoic acid, 2-methyl-, anhydride	760-93-0

Pennsylvania Right to Know – Environmentally Hazardous Substance(s)

<u>Chemical Name</u>	<u>CAS-No.</u>
2-Propenoic acid, 2-methyl-, anhydride	760-93-0

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

16. OTHER INFORMATION

Latest Revision(s):

Revised Section(s):	Updated Corporate Address Change and Rocky Mountain Poison Center Phone Number
Reference number:	00000023979
Date of Revision:	07/11/2011
Date Printed:	07/11/2011

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