



NORSOCRYL® 2 Ethylhexyl Acrylate

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® 2 Ethylhexyl Acrylate
Synonyms: 2-EHA
Molecular formula: C₁₁ H₂₀ O₂
Chemical family: acrylates
Molecular weight: 184 g/mol
Product use: Chemical intermediate

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: colourless
Physical state: liquid
Odor: sweet

WARNING!
COMBUSTIBLE LIQUID AND VAPOR.
MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.

Potential Health Effects

Primary routes of exposure:
Inhalation and skin contact.

Signs and symptoms of acute exposure:
May cause skin irritation. Prolonged or repeated exposure may cause: Allergic skin reaction: redness, rash. Vapor or aerosol: May cause irritation of respiratory tract. May also cause: headache, nausea, vomiting.

Skin:
Moderately irritating. (based on animal studies) Repeated or prolonged skin contact may cause allergic reactions in some individuals.

**NORSOCRYL® 2 Ethylhexyl Acrylate****Eyes:**

Slightly irritating. (based on animal studies)

Ingestion:

Slightly toxic to practically nontoxic. (based on animal studies)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	OSHA Hazardous
2-Propenoic acid, 2-ethylhexyl ester	103-11-7	< 99 %	Y
Phenol, 4-methoxy-	150-76-5	10 - 220 PPM	Y

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).

This material is classified as hazardous under Federal OSHA regulation.

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 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.

5. FIRE-FIGHTING MEASURES

Flash point 187 °F (86 °C) (closed cup)(Method: Standard NF M 07 036 (DIN 51755))

Auto-ignition temperature: 486 °F (252 °C) (Method: Standard : NF T 20 037 - DIN 51794)

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:



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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:

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

Carbon oxides

Hazardous organic compounds

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

Closed containers of this material may explode when subjected to heat from surrounding fire.

Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES

In case of spill or leak:

Prevent further leakage or spillage if you can do so without risk. Evacuate area of all unnecessary personnel. Ventilate the area. Eliminate all ignition sources. Avoid generation of vapors. Contain and collect spillage with non-combustible absorbent material such as sodium bicarbonate, sodium carbonate, calcium carbonate, clean sand or non-acidic clay and then wet down (dampen) the mixture with water. Sweep or scoop up using non-sparking tools and place into suitable properly labeled containers for prompt disposal. The sweepings should be wetted down further with water. 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.

7. HANDLING AND STORAGE

Handling

General information on handling:

Keep away from heat and flames.

Avoid breathing vapor or mist.

Avoid contact with the skin, eyes and clothing.

Keep container closed.

Check that all equipment is properly grounded and installed to satisfy electrical classification requirements.

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.

DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.

Storage

General information on storage conditions:

This product should be stored in a closed container, away from direct sunlight, at ambient temperatures. An air space is required above the liquid in all containers; avoid storage under an oxygen-free atmosphere. Maintain in contact with an atmosphere containing between 5 and 21% of oxygen. Store in well ventilated area away from heat and sources of ignition such as flame, sparks and static electricity. Ensure that all storage and handling equipment



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is properly grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate when transferring material. All metal and groundable storage containers, including but not limited to drums, cylinders, Returnable Intermodal Bulk Containers (RIBCs) and Class C Flexible Intermodal Bulk Containers (FIBCs) must be bonded and grounded during filling and emptying operations. Observe all federal, state and local regulations and National Fire Protection Association (NFPA) Codes which pertain to the specific local conditions of storage and use, including OSHA 29 CFR 1910.106 and NFPA 30, 70, 77, and 497.

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. Recommended inhibitor level is 10 to 220ppm. Maintain in contact with an atmosphere containing between 5 and 21% of oxygen.

Storage incompatibility – General:

This material polymerizes exothermically in the presence of heat, contamination, oxygen free atmosphere, free radicals, peroxides and inhibitor depletion liberating heat. Store separate from:

Strong oxidizing agents

Strong acids

Strong bases

Activated carbons (explosive reaction)

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 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.

Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

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 recommended). 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. When handling this material, gloves of the following type(s) should be worn:

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Polyvinyl alcohol or nitrile- butyl-rubber gloves

Polyethylene

Viton

ethyl vinyl alcohol laminate (EVAL)

Styrene-Butadiene-Rubber (SBR)

Chlorinated polyethylene

Polyvinylchloride

Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Wash contaminated clothing and clean protective equipment before reuse. Rinse immediately if skin is contaminated. Wash thoroughly after handling.

Eye protection:

Use good industrial practice to avoid eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	colourless
Physical state:	liquid
Odor:	sweet
pH:	not determined
Density:	not determined
Specific Gravity (Relative density):	0.885 (68 °F (20 °C))Water=1 (liquid)
Vapor pressure:	0.18 mmHg (77 °F (25 °C))
Vapor density:	7.67 kg/m3 (68 °F (20 °C))
Boiling point/boiling range:	419 °F (215 °C)
Melting point/range:	-130 °F (-90 °C)
Freezing point:	-130 °F (-90 °C)
Solubility in water:	0.0096 g/l 77 °F (25 °C)
Solubility in other solvents: [qualitative and quantitative]	Soluble in most organic solvents

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Viscosity, dynamic: 1.7 mPa.s 68 °F (20 °C)

Molecular weight: 184 g/mol

Oil/water partition coefficient: 3.67 - 4.32

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
Oxygen free atmosphere
Strong oxidizing agents
Strong acids
Strong bases
Activated carbons (explosive reaction)

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 flammable and toxic products :
Carbon oxides
Hazardous organic compounds

11. TOXICOLOGICAL INFORMATION

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

Data for NORSOCRYL® 2 Ethylhexyl Acrylate**Acute toxicity****Oral:**

Slightly toxic to practically nontoxic. (rat) LD50 between 4,000 - 6,400 mg/kg.

Dermal:

Practically nontoxic. (rabbit) LD50 between 7,522 - 16,000 mg/kg.

Inhalation:

No deaths observed. (rat) 8 h Exposure time (concentrated vapor)



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Skin Irritation:

Moderately irritating. (rabbit) Irritation Index: 4.9 / 8. (4 h)

Eye Irritation:

Slightly irritating. (rabbit)

Skin Sensitization:

Skin sensitizer. Repeated skin exposure. (guinea pig) Skin allergy was observed.

Skin sensitizer. LLNA: Local Lymph Node Assay. (mouse) Skin allergy was observed.

Repeated dose toxicity

Subchronic inhalation administration to rat / affected organ(s): nasal tissues, liver / signs: respiratory irritation, changes in organ structure or function

Subchronic dermal administration to mouse / affected organ(s): skin, site of contact / Local irritation

Carcinogenicity

Chronic dermal administration to mouse / Increase in tumor incidence was reported. (Effect occurred at levels causing significant irritation.)

Classified by the International Agency for Research on Cancer as: Group 3: Unclassifiable as to carcinogenicity in humans.

Genotoxicity

Assessment in Vitro:

No genetic changes were observed in laboratory tests using: bacteria

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

Assessment in Vivo:

No genetic changes were observed in laboratory tests using: animals

Developmental toxicity

Exposure during pregnancy. inhalation (rat) / No birth defects were observed.

Other information

Cross sensitization reactions may occur with related materials.

Human experience

Skin contact:

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

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway

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

Data for NORSOCRYL® 2 Ethylhexyl Acrylate



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Biodegradation:

Readily biodegradable. (15 d) biodegradation > 70 %

Octanol Water Partition Coefficient:

log Pow 3.67

Ecotoxicology

Data for NORSOCRYL® 2 Ethylhexyl Acrylate

Aquatic toxicity data:

Moderately toxic. Oncorhynchus mykiss (rainbow trout) 96 h LC50 1.8 mg/l

Aquatic invertebrates:

Moderately toxic. Daphnia 48 h EC50 1.3 mg/l

Slightly toxic to moderately toxic. Brine shrimp 24 h EC50 72 mg/l

Algae:

Moderately toxic. Desmodesmus subspicatus (green algae) 72 h EC50 1.2 - 1.7 mg/l

Microorganisms:

Protozoa 48 h EC 5 2.3 mg/l

Activated sludge 30 min EC20 > 1,000 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

US Department of Transportation (DOT): not regulated

Special Shipping Information: Bulk Shipments: NA1993, Combustible liquid, n.o.s. (2-ethylhexyl acrylate), Combustible liquid, PGIII.

International Maritime Dangerous Goods Code (IMDG): not regulated

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS

EINECS

Conforms to



Material Safety Data Sheet

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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	Conforms to
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 144)	DSL	All components of this product are on the Canadian DSL list.
Japan. Kashin-Hou Law List	ENCS (JP)	Conforms to
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	Conforms to
China. Inventory of Existing Chemical Substances	IECSC (CN)	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:

Acute Health Hazard, Fire 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):

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

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



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New Jersey Right to Know

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

Pennsylvania Right to Know

Chemical Name
2-Propenoic acid, 2-ethylhexyl ester

CAS-No.
103-11-7

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

Miscellaneous:

Other information: Refer to National Fire Protection Association (NFPA) Codes 30, 70, 77, and 497 and OSHA 29 CFR 1910.106, for safe handling.

Latest Revision(s):

Revised Section(s): Updated Corporate Address Change and Rocky Mountain Poison Center Phone Number
Reference number: 000000024183
Date of Revision: 07/11/2011
Date Printed: 07/11/2011

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