



NORSOCRYL® MADAME

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® MADAME
Synonyms: DIMETHYLAMINOETHYL METHACRYLATE
Molecular formula: C₈H₁₅NO₂
Chemical family: methacrylates
Molecular weight: 157 g/mol
Product use: Chemical intermediate

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: Colourless to yellow.
Physical state: liquid
Odor: ammoniacal

DANGER!
COMBUSTIBLE LIQUID AND VAPOR.
CAUSES EYE BURNS.
MAY CAUSE BLINDNESS.
HARMFUL IF INHALED.
MAY BE HARMFUL IF SWALLOWED.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
MAY CAUSE SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.

Potential Health Effects

Primary routes of exposure:
Inhalation and skin contact.

Signs and symptoms of acute exposure:
Corrosive to the eyes. Can cause burns of eyes. May cause skin irritation. May cause irritation of respiratory tract. Prolonged or repeated exposure may cause: Allergic skin reaction: redness, rash.

**Skin:**

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

Inhalation:

No more than moderately toxic. May cause respiratory tract irritation. (based on animal studies)

Eyes:

Corrosive. (based on animal studies)

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-, 2-(dimethylamino)ethyl ester	2867-47-2	< 99 %	Y
Phenol, 4-methoxy-	150-76-5	800 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. Call a Poison Control Center.

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. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flash point 149 °F (65 °C) (Pensky-Martens closed cup)

Auto-ignition temperature: 491 °F (255 °C)



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Lower flammable limit (LFL): 1.2 %(V)

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:

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

Carbon oxides

Nitrogen oxides

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.
Do not taste or swallow.
Do not get in eyes, on skin, or on clothing.
Avoid breathing vapor or mist.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Check that all equipment is properly grounded and installed to satisfy electrical classification requirements.
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. 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 is properly grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate when transferring material. All storage containers, including drums, cylinders and IBCs, 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 of this product above the maximum temperature tolerance reduces the shelf life.

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:

Strong acids

Strong bases

Strong oxidizing agents

Reducing agents

Peroxides

Free radical generators

Contamination

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 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 face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Wash contaminated clothing and clean protective equipment before reuse. 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 to yellow.
Physical state:	liquid
Odor:	ammoniacal
pH:	not determined
Density:	not determined
Specific Gravity (Relative density):	0.933 (68 °F(20 °C))
Vapor pressure:	0.75 mmHg (68 °F (20 °C))
Vapor density:	not determined

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Boiling point/boiling range:	369 °F (187 °C)
Freezing point:	122 °F (50 °C)
Melting point:	86 °F (30 °C)
Solubility in water:	106.1 g/l 77 °F (25 °C)
Refractive index:	1.439 68 °F (20 °C)
Viscosity, dynamic:	1.32 mPa.s 68 °F (20 °C)
Molecular weight:	157 g/mol
Oil/water partition coefficient:	0.6
Henry's constant:	0.000314 hPa

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
Strong acids
Strong bases
Strong oxidizing agents
Reducing agents

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. Hazardous polymerization may occur upon depletion of inhibitor. 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
Nitrogen oxides

11. TOXICOLOGICAL INFORMATION

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

Data for NORSOCRYL® MADAME

Acute toxicity

Oral:

Slightly toxic. (rat) LD50 1,550 - 2,650 mg/kg.

Dermal:

No more than slightly toxic. (rat and rabbit) LD50 > 2,000 mg/kg.

Inhalation:

Slightly toxic. (mouse) 2 h LC50 1.8 mg/l. signs: Local irritation of the respiratory system

Slightly toxic. (rat) 4 h LC50 0.62 mg/l.

Skin Irritation:

Moderately irritating. (rabbit)

Eye Irritation:

Corrosive. (rabbit)

Skin Sensitization:

Repeated skin exposure. (guinea pig) No skin allergy was observed

Repeated dose toxicity

Repeated oral administration to rat / affected organ(s): Gastro-intestinal tract, Stomach, Nervous system / signs: Irritation of the gastric mucosa, anemia, nervous system injury, degeneration

Genotoxicity

Assessment in Vitro:

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

Genetic changes were observed in laboratory tests using: human cells

Assessment in Vivo:

No genetic changes were observed in laboratory tests using: animals

Developmental toxicity

Exposure during pregnancy. oral (rat) / No birth defects were observed. (levels produced toxic effects in the mothers and offspring)

Reproductive effects

Exposure prior to mating. oral (rat) / No toxicity to reproduction.

Human experience

Skin contact:

Skin: Skin allergy was observed. Sensitization described in isolated cases.

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

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

Data for NORSOCRYL® MADAME**Biodegradation:**

Readily biodegradable. (28 d) 95.3 %

Octanol Water Partition Coefficient:

log Pow 1.13 (Practically no potential to bioaccumulate.)

Ecotoxicology

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

Data for NORSOCRYL® MADAME**Aquatic toxicity data:**

Slightly toxic. *Oryzias latipes* (medaka) 96 h LC50 19.1 mg/l

Oryzias latipes (medaka) 5 d LC50 5.3 mg/l

Practically nontoxic. *Leuciscus idus* (Golden orfe) 48 h LC50 461.5 mg/l

Practically nontoxic. *Carassius auratus* (goldfish) 72 h LC50 150 mg/l

Aquatic invertebrates:

Slightly toxic. *Daphnia* 48 h EC50 53 mg/l

Microorganisms:

Pseudomonas putida 18 h EC10 42.7 mg/l

Terrestrial non-mammal:

Agelaius phoeniceus 18 d LD50 98 mg/kg (Birds)

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)**

UN Number : 2522
Proper shipping name : 2-Dimethylaminoethyl methacrylate
Class : 6.1

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Packaging group : II
Marine pollutant : no

International Maritime Dangerous Goods Code (IMDG)

UN Number : 2522
Proper shipping name : 2-DIMETHYLAMINOETHYL METHACRYLATE
Class : 6.1
Packaging group : II
Marine pollutant : no
Flash point : 149 °F (65 °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.
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
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:**

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



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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

New Jersey Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester	2867-47-2

Pennsylvania Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester	2867-47-2

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:	000000066273
Date of Revision:	07/11/2011
Date Printed:	07/11/2011

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Material Safety Data Sheet

NORSOCRYL® MADAME

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