

**1 PRODUCT AND COMPANY IDENTIFICATION****Thio and Fine Chemicals**

Arkema Inc.
2000 Market Street
Philadelphia, PA 19103

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers**Phone Number****Available Hrs**

Customer Service

1-800-628-4453

8:30 to 5:30 EST

Product Name MONOISOPROPYLAMINE, ANHYDROUS

Product Synonym(s)

Chemical Family Alkyl amine

Chemical Formula C₃H₉N

Chemical Name 2-Propanamine

EPA Reg Num

Product Use

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Isopropylamine	75-31-0	100%	Y

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

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION**Emergency Overview**

Colorless liquid, ammoniacal odor

DANGER!

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE.

CAUSES EYE AND SKIN BURNS. MAY CAUSE BLINDNESS.

HARMFUL IF SWALLOWED.

HARMFUL IF ABSORBED THROUGH SKIN.

CAUSES RESPIRATORY TRACT IRRITATION.

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be slightly to moderately toxic if swallowed, moderately toxic if absorbed through skin, practically non-toxic if inhaled, and corrosive to eyes and skin. Vapor or mist may be severely irritating to the eyes and upper respiratory tract and may produce nausea, headache and dizziness. Temporary and reversible visual disturbances characterized by mildly blurred vision, a blue-gray discolorization of sight (blue haze) or halo vision (appearance of a halo when looking at light sources) may occur. If swallowed, this material may cause mild to severe burns to the mouth, throat and digestive tract. Medical conditions that may be aggravated by exposure to this



MONOISOPROPYLAMINE, ANHYDROUS

Material Safety Data Sheet

Arkema Inc.

material include lung disease or limited respiratory capacity.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature	756 F (402 C)	
Flash Point	-50.55 C	Flash Point Method
Flammable Limits- Upper	10.4 % (V)	
Lower	2.3 % (V)	

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

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). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

When burned, the following hazardous products of combustion can occur: Oxides of carbon and nitrogen

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Extinguish or turn off all ignition sources. Ventilate the space involved. Wear appropriate personal protection equipment as indicated in Section 8 of this MSDS. Contain spill with inert materials. Construct a dike to prevent spreading. Collect with non-sparking tools to a suitable container. Prevent waterway contamination. Absorb liquid onto inert absorbent and place in DOT approved drums for disposal. 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

Keep away from heat, sparks and flame.
Do not get in eyes, on skin or on clothing.
Use only with adequate ventilation.
Keep container closed.



MONOISOPROPYLAMINE, ANHYDROUS

Material Safety Data Sheet

Arkema Inc.

7 HANDLING AND STORAGE

Wash thoroughly after handling.
Do not taste or swallow.

CONTAINER HAZARDOUS WHEN EMPTY. Emptied container retains vapor and product residue. Follow labeled warnings even after container is emptied. RESIDUAL VAPORS MAY EXPLODE ON IGNITION. DO NOT CUT, DRILL GRIND OR WELD ON OR NEAR THIS CONTAINER. Improper disposal or reuse of this container may be dangerous and/or illegal.

Storage

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 rated, grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate and create a fire hazard. All storage containers, including containers such as drums, cylinders and IBC's, must be bonded and grounded during filling and emptying operations. Store away from oxidizers and reactive materials. Keep container tightly closed. 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.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

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

Eye / Face Protection

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

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 promptly and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), 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 chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions 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.

Airborne Exposure Guidelines for Ingredients

Exposure Limit

Value



MONOISOPROPYLAMINE, ANHYDROUS

Material Safety Data Sheet

Arkema Inc.

Isopropylamine

ACGIH STEL	-	10 ppm (24 mg/m ³)
ACGIH TWA	-	5 ppm (12 mg/m ³)
OSHA TWA PEL	-	5 ppm (12 mg/m ³)

-Only those components with exposure limits are printed in this section.

-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.

-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Colorless liquid, ammoniacal odor
pH	12.3
Specific Gravity	0.69 (water = 1)
Vapor Pressure	9.57 psia (0.66 bar) @ 70 F (21 C)
Vapor Density	2.03
Melting Point	NE
Freezing Point	NE
Boiling Point	90 F (32.39 C)
Solubility In Water	Completely soluble
Molecular Weight	59 g/mol

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under specified conditions or storage, shipment and/or use. See HANDLING AND STORAGE section of this MSDS for specified conditions.

Incompatibility

Avoid contact with oxidizers, perchlorates, nitrates and peroxides as violent reaction may occur. All amines, under certain conditions, may form nitrosamines; avoid mixing with Nitrite.

Hazardous Decomposition Products

None known.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

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

Isopropylamine

Single exposure (acute) studies indicate that this material is moderately toxic if swallowed by rats (LD50 122-820 mg/kg) or absorbed through rabbit skin (LD50 550 mg/kg), practically non-toxic if inhaled by rats (4-hr LC50 8.7 mg/l, 1-hr LC50 11.5 mg/l) and corrosive to rabbit eyes and skin. The odor threshold in humans is 0.5-1.2 ppm. Nose and throat irritation and visual disturbances in humans have been reported. No skin allergy was observed in guinea pigs following repeated exposure. Respiratory irritation was observed in mice following acute exposure (RD50 157 ppm). Following repeated inhalation exposure to rats, decreased body weights and eye and nasal lesions were noted. No birth defects were noted in the offspring of rats exposed by inhalation during pregnancy at dosages that produced significant adverse effects in the mother. No adverse effects were



MONOISOPROPYLAMINE, ANHYDROUS

Material Safety Data Sheet

Arkema Inc.

11 TOXICOLOGICAL INFORMATION

observed in the offspring of rats exposed by inhalation during pregnancy, even at amounts which produced toxic effects in the mother. No genetic changes were observed in tests using bacteria or human cells.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

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

Isopropylamine

This material is slightly toxic to *Daphnia magna* (48-hr EC50 92 mg/l), freshwater fish (24-hr LC50 40-80 mg/l) and bacteria (17-hr EC10 52 mg/l). It is practically non-toxic to algae (96-hr EC50 118 mg/l) and to himedaka (48-hr LC50 1,000 mg/l).

Chemical Fate Information

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

Isopropylamine

This material is readily biodegradable (95% after 21-days) and practically not bioaccumulable (log Pow 0.26). It is degraded by OH radicals in air (half-life 10-hours) and is slightly adsorbed in soils and sediments (log Koc 1.52).

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Incineration is the recommended method for disposal observing all local, state and federal regulations. 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

DOT Name	Isopropylamine
DOT Technical Name	
DOT Hazard Class	3; 8
UN Number	UN 1221
DOT Packing Group	PG I
RQ	
Marine Pollutant	No
DOT Special Information	Subsidiary Hazard - Corrosive

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	Y
Delayed (Chronic) Health	N	Reactive	N
		Sudden Release of Pressure	N

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MONOISOPROPYLAMINE, ANHYDROUS

Material Safety Data Sheet

Arkema Inc.

Ingredient Related Regulatory Information:

SARA Reportable Quantities

Isopropylamine

CERCLA RQ

100 LBS

SARA TPQ

Massachusetts Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Isopropylamine

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Isopropylamine

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Isopropylamine

16 OTHER INFORMATION

Revision Information

Revision Date 19 APR 2006
Supersedes Revision Dated 17-MAR-2005

Revision Number 9

Revision Summary

Reviewed and revised all sections.

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

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