

## SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

**CAS Number:** 78-96-6  
**Product Name:** Monoisopropanolamine (MIPA)  
**Revision Date:** Nov 21, 2019 **Date Printed:** Nov 28, 2019  
**Version:** 1.0 **Supersedes Date:** N.A.  
**Manufacturer's Name:** Thames River Chemical Corp.  
**Address:** 5230 Harvester Road Burlington, ON, CA, L7L 4X4  
**Emergency Phone:** CHEMTREC (800) 424-9300  
**Information Phone Number:** 905-681-5353  
**Fax:** 905-681-5377  
**Product/Recommended Uses:** For laboratory or industrial use only.

## SECTION 2) HAZARDS IDENTIFICATION

### Classification

Acute toxicity Dermal - Category 4  
Flammable Liquids - Category 4  
Serious Eye Damage - Category 1  
Skin Corrosion - Category 1

### Pictograms



### Signal Word

Danger

### Hazard Statements - Health

Harmful in contact with skin  
Causes severe skin burns and eye damage

### Hazard Statements - Physical

Combustible Liquid

### Precautionary Statements - General

If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.

### Precautionary Statements - Prevention

Wear protective gloves/protective clothing/eye protection/face protection.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Do not breathe dust/fume/gas/mist/vapors/spray.

Wash/Wash hands thoroughly after handling.

### Precautionary Statements - Response

IF ON SKIN: Wash with plenty of water and soap.

Call a POISON CENTER or doctor, if you feel unwell.

Specific treatment (see first-aid on the SDS).

Take off contaminated clothing. And wash it before reuse.

In case of fire: Use carbon dioxide, alcohol foam, water spray or dry chemical to extinguish.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

### Precautionary Statements - Storage

Store in a well-ventilated place.

Store locked up.

### Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

### Physical Hazards Not Otherwise Classified

No data available.

### Health Hazards Not Otherwise Classified

No data available.

## SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000078-96-6	1-AMINO-2-PROPANOL	99% - 100%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality or to reflect batch to batch variation.

## SECTION 4) FIRST-AID MEASURES

### Inhalation

Get medical advice/attention if you feel unwell or are concerned. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Remove source of exposure or move person to fresh air and keep comfortable for breathing. Eliminate all ignition sources if safe to do so.

### Eye Contact

Immediately call a POISON CENTER/doctor. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 30 minutes or until medical aid is available. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

### Skin Contact

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately call a POISON CENTER/doctor. Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash clothing before reuse. Properly dispose of leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.

### Ingestion

If vomiting occurs naturally, lie on your side, in the recovery position. Immediately call a POISON CENTER/doctor. Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

### Most Important Symptoms and Effects, Both Acute and Delayed

No data available.

### Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available.

## SECTION 5) FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

### Unsuitable Extinguishing Media

Do not use straight stream of water.

### Specific Hazards in Case of Fire

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Carbon monoxide. Carbon dioxide.

### Fire-fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Move undamaged containers from immediate hazard area if it can be done safely. Stop spill/release if it can be done safely. Cool containers with flooding quantities of water until well after fire is out. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Product has a low flashpoint: Use of water spray when fighting fire may be inefficient. Large Fire: Dike fire-control water for later disposal; do not scatter the material

### Special Protective Actions

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

## SECTION 6) ACCIDENTAL RELEASE MEASURES

### Emergency Procedure

Isolate hazard area and keep unauthorized personnel away. Stay uphill and/or upstream. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Evacuate and isolate hazard area and keep unauthorized personnel away. A vapor-suppressing foam may be used to reduce vapors.

### Recommended Equipment

Wear chemical protective clothing and positive pressure self-contained breathing apparatus (SCBA). Wear liquid tight chemical protective clothing in combination with positive pressure self-contained breathing apparatus (SCBA).

### Personal Precautions

DO NOT get on skin, eyes or clothing. Avoid breathing vapor or mist.

### Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. Dike far ahead of liquid spill for later disposal.

### Methods and Materials for Containment and Cleaning up

Small spills: Absorb with materials such as: Non-combustible material. Clay. Vermiculite. Zorb-all®. Do NOT use absorbent materials such as: Sawdust. Cellulose. Large spills: Contain spilled material if possible. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

## SECTION 7) HANDLING AND STORAGE

### General

Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. Keep away from heat, sparks and flame.

Do not get in eyes, on skin or on clothing. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. Eyewash stations and showers should be available in areas where this material is used and stored

## Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. Report ventilation failures immediately. The use of local ventilation is recommended to control emissions near the source.

## Storage Room Requirements

Store in dry, cool areas, out of direct sunlight and away from other sources of heat. Store in original containers. Keep containers securely sealed. Keep containers securely sealed when not in use. Avoid storing in direct sunlight or near other heat sources; eliminate all sources of ignition. Protect containers against banging or other physical damage when storing, transferring, or using them. Store, handle, and use corrosive materials in well-ventilated areas. Store in a dry place. Avoid moisture. Do not store in: Copper. Copper alloys. Galvanized containers.

## SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

### Eye protection

Wear indirect-vent, impact and splash resistant goggles when working with liquids

### Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber.

### Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

### Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	CANsmg	CANspmm	CANtmg	CANtppm	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)
No applicable chemical	-	-	-	-	-	-	-	-

Chemical Name	OSHA Carcinogen	OSHA Tables (Z1, Z2, Z3)	OSHA Skin designation	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH TLV Basis
No applicable chemical	-	-	-	-	-	-	-	-

Chemical Name	ACGIH Carcinogen	ACGIH Notations
No applicable chemical	-	-

## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

Density	8.01 lb/gal
Specific Gravity	0.96
Appearance	Colorless liquid
Odor Description	ammoniacal
Odor Threshold	N/A
pH	11.4 (1% aqueous solution)
Melting/Freezing Point	1 °C
Low Boiling Point	159 °C

High Boiling Point	N/A
Flash Point	80°C Closed
Vapor Pressure	0.47 mmHg at 25°C
Vapor Density	2.594 at 20 °C
Evaporation Rate	No Data Available
Upper Explosion Level	N/A
Lower Explosion Level	N/A
Water Solubility	miscible in all proportions
Coefficient Water/Oil	log Pow: -0.93
Viscosity	30.2 cP at 20 °C (Dynamic)

## SECTION 10) STABILITY AND REACTIVITY

### Reactivity

No data available.

### Stability

Stable under normal storage and handling conditions.

### Conditions to Avoid

Exposure to elevated temperatures can cause product to decompose. Avoid moisture.

### Hazardous Reactions/Polymerization

Hazardous polymerization will not occur.

### Incompatible Materials

Avoid contact with: Strong acids. Strong oxidizers. Product may potentially react with various halogenated organic solvents, resulting in temperature and/or pressure increases Corrosive when wet. Heating above 60°C in the presence of aluminum can result in corrosion and generation of flammable hydrogen gas. Avoid unintended contact with: Halogenated hydrocarbons.

### Hazardous Decomposition Products

Decomposition products depend upon temperature, air supply and the presence of other materials.

## SECTION 11) TOXICOLOGICAL INFORMATION

### Likely Route of Exposure

Inhalation, ingestion, skin absorption

### Acute Toxicity

Acute oral toxicity:

Low toxicity if swallowed. Swallowing may result in gastrointestinal irritation or ulceration. Swallowing may result in burns of the mouth and throat.

LD50, Rat, male, 2,813 mg/kg

Acute dermal toxicity:

Prolonged or widespread skin contact may result in absorption of potentially harmful amounts.

LD50, Rabbit, 1,851 mg/kg

Acute inhalation toxicity:

At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

Harmful in contact with skin

### Aspiration Hazard

No data available.

### Carcinogenicity

No data available.

### Germ Cell Mutagenicity

No data available.

### Reproductive Toxicity

No data available.

### Respiratory/Skin Sensitization

No data available.

### Serious Eye Damage/Irritation

Causes serious eye damage

### Skin Corrosion/Irritation

Causes severe skin burns and eye damage

### Specific Target Organ Toxicity - Repeated Exposure

No data available.

### Specific Target Organ Toxicity - Single Exposure

No data available.

## SECTION 12) ECOLOGICAL INFORMATION

### Toxicity

Acute toxicity to fish:

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested)

LC50, *Leuciscus idus* (Golden orfe), static test, 96 Hour, 215 - 464 mg/l

Acute toxicity to aquatic invertebrates:

EC50, *Daphnia magna* (Water flea), 48 Hour, 109 mg/l

Acute toxicity to algae/aquatic plants:

ErC50, *alga Scenedesmus* sp., static test, 72 Hour, Growth rate inhibition, 32.7 mg/l

### Mobility in Soil

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 1.78 Estimated.

### Bio-accumulative Potential

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -0.93 at 23 °C Measured

Bioconcentration factor (BCF): 0.11 Estimated.

### Persistence and Degradability

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. 10-day Window: Pass

Biodegradation: 78 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 2.56 mg/mg

Chemical Oxygen Demand: 1.59 mg/mg Dichromate

Biological oxygen demand (BOD): Incubation Time - 5 d; BOD - 43 %

### Other Adverse Effects

No data available.

## SECTION 13) DISPOSAL CONSIDERATIONS

### Waste Disposal

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes.

It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with national, provincial and local laws.

## SECTION 14) TRANSPORT INFORMATION

	Transport Canada Information	U.S. DOT Information
UN number:	UN2735	UN2735
Proper shipping name:	Amines, liquid, corrosive, n.o.s. or Polyamines, liquid, corrosive, n.o.s. (Monoisopropanolamine)	Amines, liquid, corrosive, n.o.s. or Polyamines, liquid, corrosive, n.o.s. (Monoisopropanolamine)
Hazard class:	8	8
Packaging group:	III	III
Hazardous substance (RQ):		No Data Available
Marine Pollutant:	No Data Available	No Data Available
Note / Special Provision:	Note / Special Provision	No Data Available
Toxic-Inhalation Hazard:		No Data Available
Transport in bulk (according to Annex II of MARPOL 73/78):	No Data Available	

## SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000078-96-6	1-AMINO-2-PROPANOL	99% - 100%	DSL,TSCA,EU_EC_Inventory

## SECTION 16) OTHER INFORMATION

### Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CANsmg or CANspmm - Canadian Short Term Exposure Level in mg/L or in ppm; CANtmg or CANtppm - Canadian Time Weighted Average in mg/L or in ppm; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

### Version 1.0:

Revision Date: Nov 21, 2019

First Edition.

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