

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

CAS Number: 102-71-6
Product Name: Triethanolamine 99 Low Freeze Grade 85%
Revision Date: Dec 13, 2018 **Date Printed:** Dec 13, 2018
Version: 1.1 **Supersedes Date:** Aug 30, 2018
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

Eye Irritation - Category 2A

Pictograms



Signal Word

Warning

Hazard Statements - Health

Causes serious eye irritation

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

Wash thoroughly/Wash hands thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

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

If eye irritation persists: Get medical advice/attention.

Precautionary Statements - Storage

No precautionary statement available.

Precautionary Statements - Disposal

No precautionary statement available.

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000102-71-6	TRIETHANOLAMINE	84.0% - 86.0%
0007732-18-5	WATER	14.0% - 16.0%

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Eye Contact

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 15-20 minutes or until medical aid is available. If irritation occurs, cautiously rinse eyes with lukewarm, gently flowing water for 5 minutes, while holding the eyelids open and seek medical attention.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention. Wash contaminated clothing before re-use or discard.

Ingestion

Rinse mouth. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position. Get medical advice/attention.

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, carbon dioxide, alcohol-resistant foam or dry chemical. Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media

Do not use straight stream of water.

Specific Hazards in Case of Fire

No flashpoint observed up to the boiling point. Flashpoint of pure TEA is 200°C (393°F).

During a fire, smoke may contain vaporized TEA. Combustion products may include toxic fumes of nitrogen oxides, hydrogen cyanides, carbon monoxide and carbon dioxide.

Fire-fighting Procedures

Evacuate the area and fight fire from a safe distance or a protected location. Approach the fire from upwind to avoid hazardous vapors. Water spray may be used to flush spills away from ignition sources. Avoid contact with this material during fire fighting operations. Wear chemical resistant clothing (chemical splash suit) and positive-pressure self-contained breathing apparatus.

Special Protective Actions

Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

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.

Recommended Equipment

Wear chemical protective clothing.

Personal Precautions

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing.

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

Absorb Liquids in vermiculite, dry sand, earth, or similar inert material and deposit in sealed containers for disposal.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. 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 All containers must be properly labelled.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits.

Storage Room Requirements

Store in dry, cool areas, out of direct sunlight and away from other sources of heat. Empty container retain residue and may be dangerous. Keep containers tightly closed when not in use. Store in a cool, dry and well-ventilated place. Store away from strong oxidants, strong acids, and other incompatible materials. Do not store in containers made of aluminum, copper, brass or other copper alloys.

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.

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	CANspm	CANtmg	CANtppm	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA Carcinogen	OSHA Tables (Z1, Z2, Z3)	OSHA Skin designation	ACGIH STEL (mg/m3)
DIETHANOLAMINE	26	6	13	3								
TRIETHANOLAMINE												

Chemical Name	ACGIH STEL (ppm)	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH TLV Basis	ACGIH Carcinogen	ACGIH Notations
DIETHANOLAMINE		1 (IFV)		Liver & kidney dam	A3	Skin; A3

TRIETHANOLAMINE		5		Eye & skin irr		
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irr - Irritation

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	9.35 lb/gal
Specific Gravity	1.12
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Appearance	colorless viscous liquid
Odor Description	slight ammonia-like odour
Odor Threshold	N/A
pH	10.5 (10% solution)
Melting/Freezing Point	-9 °C
Low Boiling Point	120 °C
High Boiling Point	N/A
Flash Point	None observed upto boiling point
Vapor Pressure	<0.01 mmHg
Vapor Density	5.14 (air=1)
Evaporation Rate	<0.01 (n-Butyl Acetate = 1)
Upper Explosion Level	N/A
Lower Explosion Level	N/A
Water Solubility	completely soluble in water
Coefficient Water/Oil	-1.75
Viscosity	110 mPas (25°C)

SECTION 10) STABILITY AND REACTIVITY

Reactivity

No Data Available

Stability

Stable under normal temperatures and pressures. Unstable at elevated temperatures and pressures. Slowly turns brown on exposure to air and light.

Conditions to Avoid

his product should not be heated above 60°C in the presence of aluminum due to excessive corrosion and potential chemical reaction releasing flammable hydrogen gas.

Hazardous Reactions/Polymerization

Mixing with nitrite containing fluids may cause nitrosamine formation.

Incompatible Materials

Avoid contact with strong acids, strong oxidizing agents and halogenated hydrocarbons. Avoid contact with absorbent materials such as cellulose and sawdust. Avoid contact with air, light and moisture.

Hazardous Decomposition Products

Decomposition products may include nitrogen oxides.

SECTION 11) TOXICOLOGICAL INFORMATION

Likely Route of Exposure

Inhalation, ingestion, skin absorption

Acute Toxicity

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 irritation

Skin Corrosion/Irritation

No Data Available

Specific Target Organ Toxicity - Repeated Exposure

No Data Available

Specific Target Organ Toxicity - Single Exposure

No Data Available

0000102-71-6 TRIETHANOLAMINE

LD50 (oral, rat): 5000-9110 mg/kg (2,8,17,18)

LD50 (oral, mouse): 7400 mg/kg (18)

LD50 (oral, rabbit): 2200 mg/kg (18) (reported but cannot be confirmed)

LD50 (oral, guinea pig): 8000 mg/kg (8,17); 2200 mg/kg (18) (reported, but cannot be confirmed)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

No Data Available

Mobility in Soil

Soluble in water; low potential for absorption in soil.

Bio-accumulative Potential

Low potential for bioaccumulation.

Persistence and Degradability

Material is readily biodegradable in water.

Other Adverse Effects

No Data Available

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

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

UN number: Not Regulated

Hazard class: N/A

Proper shipping name: N/A

Packaging group: N/A

U.S. DOT Information

UN number: Not Regulated

Hazard class: N/A

Proper shipping name: N/A

Packaging group: N/A

*Reportable Quantity for U.S. Shipments: 100 lbs (45.4 kg) for Diethanolamine.

*Bulk shipments exceeding >20,000 lbs (>9,080 kg) ship as:

*UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIETHANOLAMINE), Class 9, PG III.

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000102-71-6	TRIETHANOLAMINE	84.0% - 86.0%	DSL,TSCA,EU_EC_Inventory - EC Inventory
0007732-18-5	WATER	14.0% - 16.0%	DSL,TSCA,EU_EC_Inventory - 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: Dec 13, 2018

First Edition.

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