

# Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	<p>Corrosive to eyes and skin on contact. Irritating to skin, eyes, and the respiratory system. Lachrymator. This compound is a skin sensitizer. Hygroscopic -- keep container tightly sealed.</p>	

## Section I. Chemical Product and Company Identification

Chemical Name	<b>2-(2-Aminoethylamino)ethanol</b>		
Catalog Number	A0299	Supplier	TCI America 9211 N. Harborsgate St. Portland OR 1-800-423-8616
Synonym	Aminoethyl Ethanolamine		
Chemical Formula	$\text{NH}_2\text{CH}_2\text{CH}_2\text{NHCH}_2\text{CH}_2\text{OH}$		
CAS Number	111-41-1	In case of Emergency Call	<b>Chemtrec®</b> <b>(800) 424-9300 (U.S.)</b> <b>(703) 527-3887 (International)</b>

## Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
2-(2-Aminoethylamino)ethanol	111-41-1	Min. 99.0 (GC, T)	Not available.	Rat LD <sub>50</sub> (oral) 3000mg/kg Rat LD <sub>50</sub> (dermal) 2250mg/kg Rabbit LD <sub>50</sub> (dermal) 3560µL/kg

## Section III. Hazards Identification

Acute Health Effects	Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Skin contact may result in sensitization. Always cover all exposed skin with an impermeable layer and use proper eye protection. A OSHA/MSHA approved dust and vapor respirator is required when working with this material. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	<p><b>CARCINOGENIC EFFECTS</b> : Not available.  <b>MUTAGENIC EFFECTS</b> : Not available.  <b>TERATOGENIC EFFECTS</b> : Not available.  <b>DEVELOPMENTAL TOXICITY</b>: Not available.</p> <p>Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.</p>

## Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. SEEK IMMEDIATE MEDICAL ATTENTION in case of ingestion of a radioactive material.

## Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	368°C (694.4°F)
Flash Points	144°C (291.2°F).	Flammable Limits	LOWER: 1% UPPER: 8%
Combustion Products	These products are toxic carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO, NO <sub>2</sub> ).		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		

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Emergency phone number (800) 424-9300

Fire Fighting Media  
and Instructions

SMALL FIRE: Use DRY chemical powder.  
LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.  
Consult with local fire authorities before attempting large scale fire-fighting operations.

**Section VI. Accidental Release Measures**Spill Cleanup  
Instructions

Corrosive material. Lachrymatory material. Irritating material. Harmful material. Sensitizing material. Hygroscopic material. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT get water inside container. DO NOT touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Consult federal, state, and/or local authorities for assistance on disposal.

**Section VII. Handling and Storage**Handling and Storage  
Information

CORROSIVE. LACHRYMATOR. IRRITANT. HARMFUL. SENSITIZER. HYGROSCOPIC.  
Keep container dry. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. DO NOT ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively.  
Always store away from incompatible compounds such as oxidizing agents.

**Section VIII. Exposure Controls/Personal Protection**

## Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash station and safety shower is proximal to the work-station location.

## Personal Protection

Face shield. Lab coat. Vapor respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.



## Exposure Limits

Not available.

**Section IX. Physical and Chemical Properties**

Physical state @ 20°C	Liquid. (Clear, colorless.)	Solubility	Very soluble in water, alcohol, acetate.
Specific Gravity	1.029 (water=1)		
Molecular Weight	104.15	Partition Coefficient	Not available.
Boiling Point	140 to 145 °C (284 to 293 °F)	Vapor Pressure	Not available.
Melting Point	Not available.	Vapor Density	3.6 (Air = 1)
Refractive Index	1.4861 @ 20 °C	Volatility	Not available.
Critical Temperature	Not available.	Odor	Mild ammonia.
Viscosity	Not available.	Taste	Not available.

**Section X. Stability and Reactivity Data**

## Stability

This material is stable if stored under proper conditions. (See Section VII for instructions)

## Conditions of Instability

Avoid excessive heat and light. Avoid contact with acid.

## Incompatibilities

Reactive with oxidizing agents, copper, copper alloys, zinc, galvanized iron.

**Section XI. Toxicological Information**

## RTECS Number

KJ6300000

## Routes of Exposure

Eye Contact. Ingestion. Inhalation. Skin contact.

## Toxicity Data

Rat LD<sub>50</sub> (oral) 3000mg/kg  
Rat LD<sub>50</sub> (dermal) 2250mg/kg  
Rabbit LD<sub>50</sub> (dermal) 3560µL/kg

## Chronic Toxic Effects

**CARCINOGENIC EFFECTS** : Not available.  
**MUTAGENIC EFFECTS** : Not available.  
**TERATOGENIC EFFECTS** : Not available.  
**DEVELOPMENTAL TOXICITY**: Not available.  
Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

## Acute Toxic Effects

Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Skin contact may result in sensitization. Always cover all exposed skin with an impermeable layer and use proper eye protection. A OSHA/MSHA approved dust and vapor respirator is required when working with this material. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

**Section XII. Ecological Information**

## Ecotoxicity

Not available.

## Environmental Fate

If released to the atmosphere, aminoethyl ethanolamine will exist primarily in the vapor-phase where it will degrade rapidly by reaction with photochemically produced hydroxyl radicals (estimated half-life of 3.3 hours). Physical removal from the atmosphere may be possible through wet deposition. If released to soil or water, aminoethyl ethanolamine will probably biodegrade. The results of one biodegradation screening study have indicated that aminoethyl ethanolamine biodegrades readily. Aminoethyl ethanolamine can exist in both the neutral and protonated forms in environmental media; the neutral form may leach readily; the mobility of the protonated form is not known. Occupational exposure occurs through skin contact.

**Section XIII. Disposal Considerations**

## Waste Disposal

Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

**Section XIV. Transport Information**

## DOT Classification

Class 8: Corrosive material

## PIN Number

UN1760

## Proper Shipping Name

Corrosive liquid, n.o.s.

## Packing Group (PG)

III

## DOT Pictograms

**Section XV. Other Regulatory Information and Pictograms**

## TSCA Chemical Inventory (EPA)

This compound is **ON** the EPA Toxic Substances Control Act (TSCA) inventory list.

## WHMIS Classification (Canada)

CLASS E: Corrosive liquid.

## EINECS Number (EEC)

203-867-5

## EEC Risk Statements

R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.  
R34- Causes burns.  
R42/43- May cause sensitization by inhalation and skin contact.

## Japanese Regulatory Data

Not available.

**Section XVI. Other Information****Version 1.0****Validated on 6/14/2001.****Printed 11/29/2011.****Notice to Reader**

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.