



NORTH Metal and Chemical Co.

1. Company Identification and Product Hazard Overview:

Product Name : Monoethanolamine
Synonyms : Ethanolamine, MEA, NorthQuest 7304, NQ7304
Recommended Use : Used as a neutralizing agent in boiler treatment, and as a chemical intermediate in the production of floor polishes, pesticides, coatings, and pharmaceuticals.
Manufactured for : **North Metal and Chemical Company**
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In Case of Emergency: Call CHEMTREC (24H): 1-800-424-9300

2. Hazard Identification:

GHS Classification:

Acute Toxicity, Oral (Category 4)
Acute Toxicity, Inhalation (Category 4)
Acute Toxicity, Dermal (Category 4)
Skin Corrosion (Category 1B)
Serious Eye Damage (Category 1)
Specific Target Organ Toxicity - Respiratory System - Single Exposure (Category 3)
Chronic Aquatic Hazard (Category 3)

Signal Word: DANGER

Pictograms:



Hazard Statements:

H302 + H312 + H332 : Harmful if swallowed, in contact with skin, or inhaled
H314 : Causes severe skin burns and serious eye damage.
H335 : May cause respiratory irritation
H412 : Harmful to aquatic life with long lasting effects

Precautionary Statements:

Prevention:

P261 : Avoid breathing dust/fume/gas/mist/vapors/spray
P273 : Avoid release to the environment
P280 : Wear protective gloves/protective clothing/eye protection/face protection.
P281 : Use personal protective equipment as required

Response:

P301 + P330 + P331 : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Immediately call a poison center/doctor.
+P310

3. Composition/Information on Ingredient:

Chemical Name : Monoethanolamine
Chemical Family : Amines
Chemical Formula : C₂H₇NO

Substance:	CAS Number:	EC	Compo. (%)
Monoethanolamine	141-43-5	205-483-3	90.01 - 99.99

4. First Aid Measures:

General Advice: : Immediate medical attention is required. Move out of dangerous area. Show this safety data sheet to physician

Eyes : Rinse with plenty of water. Get medical attention immediately. Continue rinsing during transport. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

Skin : Take off contaminated clothing and shoes immediately. Rinse immediately with plenty of water. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If skin irritation persists, call a physician.

Ingestion : Clean mouth with plenty of water afterward. Never give anything by mouth to an unconscious person. Take victim immediately to the hospital. Do not induce vomiting! May cause chemical burns in the mouth and throat.

Inhalation : If breathed in, move person into fresh air. Consult a physician after significant exposure.

Note to Physician : Treat symptomatically.

PPE for first responders : Gloves and safety goggles are highly recommended.

5. Fire Fighting Measures:

Extinguishing Media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

General Hazard : Water spray may be ineffective unless used by experienced firefighters. Do not allow run-off to enter drains or water supply.

Special hazards arising from the substance : Carbon oxides, Nitrogen Oxides (NO_x)

Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be allowed to enter drains or water supply. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Fire Fighting Equipment : Be sure to use self-contained breathing apparatus.

Flash Point (°C) : 92.5 °C (198 °F)

6. Accidental Release Measures:

Protective Gear for Personnel : Wear respiratory protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental Precaution : Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material (sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations.

6. Accidental Release Measures (cont.):

Release Notes : If spill could potentially enter any waterway, including intermittent dry creeks, contact local authorities. Evacuate at-risk personnel to safe areas. Ensure only those with suitable PPE intervene.

7. Handling and Storage:

Handling : Avoid formation of aerosol. Do not breath vapors or mists. Avoid sparking. Avoid contact with skin, eyes, and clothing. Do not drink, eat, or smoke without washing beforehand. Only handle in well-ventilated areas. Dispose of rinse and waste in accordance with all local/national regulations.

Storage : Store in a cool, dry well-ventilated area. Keep containers closed and up right when not in use. Keep product isolated from incompatible materials/conditions (reacts with copper, aluminum, zinc, and their alloys.)

8. Exposure Controls and Personal Protection:

<u>Components</u>	<u>CAS-No.</u>	<u>Value</u>	<u>Control Parameters</u>	<u>Basis</u>
Monoethanolamine	141-43-5	TWA	1 ppm 2.5 mg/m3	2006/15/EC
	More Information: Indicative Skin: Identifies the possibility of significant uptake through the skin			
		STEL	3 ppm 7.6 mg/m3	2006/15/EC
	More Information: Indicative Skin: Identifies the possibility of significant uptake through the skin			
		TWA	1 ppm 2.5 mg/m3	GB EH40
	More Information: Skin: Can be absorbed through skin. The assigned substances are those which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	3 ppm 7.6 mg/m3	GB EH40
	More Information: Skin: Can be absorbed through skin. The assigned substances are those which there are concerns that dermal absorption will lead to systemic toxicity.			

Engineering Controls : Use appropriate engineering controls to avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product. Ensure eye washing stations and safety showers are close and operational.

Personal Protective Equipment

Eyes and face: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.

Skin and body: Wear rubber gloves, apron, boots or whole bodysuit when handling this product. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Respiratory: In case of vapor or aerosol formation, wear a respirator with an approved filter.

8. Exposure Controls and Personal Protection (cont.):

Butyl-rubber Gloves: 0.2mm thick: Breakthrough time = >30 min

0.6mm thick: Breakthrough time = >240 min

0.8mm thick: Breakthrough time = >480 min

Work Hygienic Practices : Handle in accordance with good standard hygiene and safety practices. Do not eat, drink, or smoke while using this product. Wash hands before breaks and at the end of the day.

Control of Environmental

Exposure : Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. Chemical and Physical Properties:

Appearance	: Clear Liquid	Vapor Pressure	: 0.5 hPa at 20°C
Odor	: Amine-like	Vapor Density	: 2.1- (Air = 1.0)
Odor threshold	: Not available	Relative Density	: 1.016 g/cm ³ @ 20°C
Color	: Colorless	Solubility	: completely soluble @ 20°C
pH	: 12.1 @ 20°C	Partition coefficient (n-octanol/water)	: log POW: -2.3 @25°C
Melting Point	: 4°C	Auto Ignition Temp.	: 424°C
Freezing Point	: -4°C	Molecular Weight	: 61.08 g/mol
Boiling Range	: 167°C		
Flash Point	: 92.5°C		
Viscosity @ 20 °C	: 3.5 cP		
Decomposition Temp.	: Not available		
Evaporation Rate	: .Not available		
Lower Explosive Limit	: 3.4% (V) at 88.3°C		
Upper Explosive Limit	: 27% (V) at 133.8°C		

10. Stability and Reactivity:

Stability : The product is stable under recommended storage conditions. Flammable liquid and vapors, avoid contact with heat

Possibility of Hazardous Reactions : None under normal processing.

Hazardous Decomposition Products : Thermal decomposition can lead to release of irritating gases and vapors. Nitrogen Oxides (NOx).

Incompatible Materials : Reacts with copper, aluminum, zinc, and their alloys. Do not store near acids nor oxidizing agents.

Conditions to Avoid : Heat, flames, sparks

11. Toxicological Information:

Acute toxicity

Oral:	LD50: 1089 mg/kg; Rat
Inhalation:	LD50: 20 mg/l; 4h; Vapor
Dermal:	LD50: 2000mg/kg; Estimate

Skin corrosion: Rabbit: Causes Burns; OECD 404

Eye damage: Rabbit: Risk of serious damage to eyes; OECD 405

Respiratory or Skin Sensitization: Guinea Pig: Did not cause skin sensitization

11. Toxicological Information (cont.):

Germ cell mutagenicity:

Genotoxicity: Ames Test

Salmonella typhimurium - Negative - OECD 471

Mouse - Negative - Mutagenicity (Micronucleus Test)

Carcinogenicity:

No Data Available

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by OSHA.

Reproductive toxicity: No data available

12. Ecological Information:

All work practices must be aimed at eliminating environmental contamination.

Toxicity:

Toxicity to fish:

LC50 - Cyprinus Carpio (Carp) - 349 mg/l - 96h

NOEC - Oryzias latipes (Orange-Red Killifish) - 1.2 mg/l - 30d

Toxicity to daphnia and other aquatic Invertebrates:

EC50 - Daphnia magna (Water flea) - 65 mg/l - 48h

NOEC - Daphnia Magna (Water flea) - 0.85 mg/l - 30d

Toxicity to algae:

EC50 - Pseudokirchneriella subcapitata (Green Algae) - > 2.8 mg/l - 72h

Biodegradability:

Readily biodegradable

Bioaccumulative Potential:

Not expected

Mobility in soil:

Not expected

Results of PBT and vPvB assessment:

This substance is not considered to be persistent, bioaccumulative, or toxic.

Other Adverse effects:

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

13. Disposal Considerations:

Disposal Method

: Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations.

For Large Spills

: Do not allow to enter drains, waterways, or soil.

Product Disposal

: Dispose of at a supervised incineration facility or an appropriate waste disposal facility according to current applicable local, state and federal laws, regulations and product characteristics at time of disposal.

Empty Container

: Empty remaining contents. Dispose of as unused product.

General Comments

: Refer to section 6, accidental release measures for additional information.

14. Transport Information:

Regulatory Information	UN No.	Proper Shipping Name	UN Class	Packing Group	Labels
US DOT	2491	Ethanolamine	8	III	Corrosive Sticker
IMDG	2491	Ethanolamine	8	III	Corrosive Sticker
IATA	2491	Ethanolamine	8	III	Corrosive Sticker

15. Regulatory Information:

DSL/NDSL: All ingredients are listed on the DSL Inventory

California Prop 65: Not Listed

Massachusetts THSL: Not Listed

Pennsylvania HSL: Listed: Ethanol, 2-amino

New Jersey Right to Know: Listed: 2-aminoethanol

SARA 302 Components: Not Listed

SARA 313 Components: Not Listed

SARA 311/312: Acute Health Hazard, Fire Hazard

US Toxic Substances Control Act: All components listed on the TSCA inventory

WHMIS Canada:

CLASS B3: Combustible Liquid

CLASS E: Corrosive

16. Other Information:

Creation Date: November 6, 2023

The information contained in this SDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of the manufacturer/supplier, they are not held responsible for loss, injury, and expense arising out of the product's use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this MSDS.