ESSENTIAL CHEMISTRY. INNOVATIVE SOLUTIONS.

SAFETY DATA SHEET

Print Date: August 24, 2017

Section 1: Product & Company Information

Product Identifier: Triethanolamine

Other Means of Identification
Product Number: No data available.

Recommended Use and Restrictions on Use
Recommended Use: Not available.
Restrictions on Use : Not known.

Manufacturer / Importer / Supplier / Distributor Information
Company Name: CORECHEM Inc.
Address: 4320 Greenway Drive
Knoxville, TN 37918
USA

Information Telephone Number: 1-865-524-4239
Fax Number: 1-865-524-3375
Website: www.corecheminc.com
Contact Person: Regulatory Manager
E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 *(monitored 24 hours/day)*

Section 2: Hazards Identification

GHS Hazard Classification(s)
Not classified as hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)
Not classified.

Health Hazard(s)
Not classified.

Environmental Hazard(s)
Not classified.

Label Elements

Signal Word
No signal word

Hazard Symbol(s)
No symbol

Hazard Statement(s)
Not applicable.

Precautionary Statements

General
Not applicable.

Prevention
Not applicable.

Response
Not applicable.

Storage
Not applicable.

Disposal
Not applicable.

Hazard(s) not otherwise classified (HNOC)
None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity [2]	Common Name/Synonym(s)	CAS # [3]	Weight %	Impurity or Stabilizing Additive
Triethanolamine	-	102-71-6	99 – 100%	No

1. Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
3. "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

If breathed in, move person into fresh air. Get medical attention if symptoms persist.

Skin Contact

Wash skin thoroughly with soap and water. Get medical attention is symptoms occur.

Eye Contact

Flush thoroughly with water. Get medical assistance if irritation occurs.

Ingestion

Rinse mouth. Call a poison control center or doctor/physician if you feel unwell.

Most important symptoms/effects, acute and delayed

Symptoms

May be irritating to eyes, respiratory system and skin.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically.

Section 5: Fire-Fighting Measures

General Fire Hazards

In case of fire and/or explosion do not breathe fumes.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Extinguishing powder, alcohol resistant foam, carbon dioxide, water spray

Unsuitable Extinguishing Media

Water

Specific Hazards Arising from the Chemical

May ignite at high temperature.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Evacuate spill area. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low area. Remove all possible sources of ignition in the surrounding area. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment. Ventilate contaminated area thoroughly shut off leaks if possible without personal risk.

Methods and Materials for Containment and Clean-Up

Small Spills: Absorb spill with vermiculite or other inert material. Clean surface thoroughly to remove residual contamination.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Precautions for Safe Handling

Use caution when handling/transferring. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible. Observe good industrial hygiene practices.

Conditions for Safe Storage, including any Incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (See Section 10). Ensure that all local regulations regarding handling and storage facilities are followed.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Triethanolamine	TWA	5 mg/m3	US. ACGIH Threshold Limit Values

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Use eye protection.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

In case of inadequate ventilation use suitable respirator.

Hygiene Measures

Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Liquid
Color: Colorless to pale yellow

Odor: Slight ammonia odor
Odor Threshold: No data available.
pH: 10.5 0.1 N Aqueous solution
Melting Point/Freezing Point: 20.5 °C
Initial Boiling Point and Boiling Range: 335 °C
Flash Point: 179 °C (Closed Cup)
Evaporation Rate (butyl acetate=1)**:** No data available.
Flammability (solid, gas): No data available.
Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: No data available.
Flammability Limit – Lower: No data available.
Explosive Limit – Upper: No data available.
Explosive Limit – Lower: No data available.

Vapor Pressure: < 0.01 kPa (25 °C)
Vapor Density (air =1)**:** 5.1
Relative Density (water=1)**:** 1.13 (20 °C)
Solubility(ies):

Solubility in water: Completely Soluble
Solubility (other): No data available.

Partition coefficient (n-octanol/water): -1.00
Auto-Ignition Temperature: No data available.
Decomposition Temperature: No data available.
Viscosity: No data available.

Other Information:

Molecular Weight:	149.19 g/mol
Formula:	$C_6H_{15}NO_3$

Section 10: Stability and Reactivity

Reactivity
No dangerous reaction known under conditions of normal use.

Chemical Stability
Material is stable under normal conditions.

Possibility of Hazardous Reactions
Hazardous polymerization does not occur.

Conditions to Avoid
Heat. Keep away from sources of ignition - No smoking.

Incompatible Materials
Acids. Copper. Copper alloys. Strong oxidizing agents. Galvanized iron.

Hazardous Decomposition Products
Thermal decomposition may produce oxides of carbon and nitrogen.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: May cause irritation of the gastrointestinal tract.
Inhalation: Spray mists may cause respiratory tract irritation.
Skin Contact: May cause irritation.
Eye Contact: May irritate eyes.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral
Triethanolamine: LD 50 (Rat): 8.0 g/kg

Dermal
Triethanolamine: LD 50 (Rabbit): > 20,000 mg/kg

Inhalation
No data available.

Repeated Dose Toxicity
No data available.

Skin Corrosion/Irritation
May cause skin irritation.

Serious Eye Damage/Eye Irritation
May irritate eyes.

Respiratory/Skin Sensitization
Not a skin sensitizer.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

US. National Toxicology Program (NTP) Report on Carcinogens
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro
No mutagenic components identified.

In Vivo
No mutagenic components identified.

Reproductive Toxicity
None known.

Specific Target Organ Toxicity – Single Exposure
None known.

Specific Target Organ Toxicity – Repeated Exposure
None known.

Aspiration Hazard
Not classified.

Other Effects
None known.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish
Triethanolamine: LC 50 (Fathead minnow (Pimephales promelas), 96 h): 10,610 - 13,010 mg/l Mortality

Aquatic Invertebrates
Triethanolamine: LC 50 (Water flea (Daphnia magna), 24 h): 1,390 mg/l Mortality
Triethanolamine: LC 50 (Brine shrimp (Artemia salina), 24 h): 5,600 mg/l Mortality

Toxicity to Aquatic Plants
No data available.

Chronic Hazards to the Aquatic Environment

Fish
No data available.

Aquatic Invertebrates
No data available.

Toxicity to Aquatic Plants
No data available.

Persistence and Degradability

Biodegradation
There are no data on the degradability of this product.

BOD/COD Ratio
No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)
No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)
Log Kow: -1.00

Mobility in Soil
The product is water soluble and may spread in water systems.

Other Adverse Effects
There are no data on the ecotoxicity of this product.

Section 13: Disposal Considerations

Disposal Instructions
Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated Packaging
Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section 14: Transportation Information

US Department of Transportation (DOT)
This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)
This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)
No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2
Chronic Health Hazard: /
Flammability: 1
Physical Hazard: 0
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2
Fire Hazard: 1
Reactivity Hazard: 0
Special: N/A
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL – Immediately Dangerous to Life and Health
Kg – Kilogram
l – Liter
lb – Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml – milliliter
N/A – Not Applicable
N/D – Not Determined
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
STEL – Short-term Exposure Limit
TWA - Time weighted average
ACGIH - American Conference of Industrial Hygienists
AIHA – American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS – Chemical Abstracts Service
DOT – US Department of Transportation
EPA – US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OSHA – US Occupational Health and Safety Administration
SARA – US EPA Superfund Amendments and Reauthorization Act
TSCA – US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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