

1. PRODUCT NAME: Monoethanolamine

2. CHEMICAL NAME:

3. SYNONYMS: MEA

4. CAS NUMBER: 141-43-5

5. COMPOSITION: Monoethanolamine (141-43-5)
100%

6. PROPERTIES: ODOR & APPEARANCE: clear, colorless, hygroscopic liquid with ammonia odor
ODOR THRESHOLD: 2-5ppm
VAPOUR PRESSURE: approx. 4mmHg/0.53kPa (20 c)
EVAPORATION RATE (butyl Acetate=1): not known – slower than mineral spirits
VAPOR DENSITY (air=1): 2.1
BOILING RANGE: 171 c/340 F
FREEZING POINT: 10c/51 F
SPECIFIC GRAVITY: 1.018 (20/20 c)
WATER SOLUBILITY: complete
IN OTHER SOLVENTS: completely soluble in alcohols, acetone; slightly soluble in aromatic hydrocarbons; poor solubility in aliphatic hydrocarbons
VISCOSITY: 19 centipoise (25 c)
PH: 12.1 as a 25% solution – strongly alkaline

7. HAZARDS: HMIS (U.S.A.): Health – 3, Fire – 2, Reactivity - 0
MATERIAL USE: Emulsifier for ag. Chem., cleaners, polishes, cosmetics; corrosion inhibitor, removal of H₂S from natural gas, etc.

8. FIRE FIGHTING INFORMATION: FLASH POINT: 85 c/185 F (closed cup)
AUTOIGNITION TEMPERATURE: 410 c/770 F
FLAMMABLE LIMITS: 5.5% - 17%
COMBUSTION PRODUCTS: carbon monoxide, nitrogen oxides, ammonia
FIREFIGHTING PRECAUTIONS: foam, dry chemical, water fog, water spray only to cool & dilute, water jet may spread flames; firefighters must wear SCBA
STATIC DISCHARGE: will not accumulate a static charge
MECHANICAL IMPACT: not sensitive
CHEMICAL STABILITY: stable; will not polymerize
REACTIVE WITH: strong oxidizing agents, strong acids & acid anhydrides; explosive in contact with finely divided cellulose nitrite (gun cotton); corrodes copper and its alloys, zinc, iron and aluminium; violent reaction with certain monomers, and reducing agents (hydrazines)
DECOMPOSITION PRODUCTS: none from Hazardous Combustion Products

9. PERSONAL PROTECTION MEASURES: HANDS: butyl, neoprene, nitrile or “Viton” gloves required – check with supplier to confirm suitability
EYES: safety glasses with side shields or chemical goggles – always protect the eyes
VENTILATION: low vapor pressure – not required unless product mist or vapor is created by handling
CLOTHING: impermeable (hands, above) apron, boots, long sleeves recommended if splashing is possible

10. FIRST AID PROCEDURES: SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.

IN CASE OF
TRANSPORT EMERGENCY
CONTACT CHEMTREC
USA: 1-800-424-9300
INTERNATIONAL: 1-703-527-3887



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Matthews, NC 28105
(704) 845 9440

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EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.

INHALATION: Remove from contaminated area promptly. **CAUTION:** Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

11. **EXPOSURE LIMITS:** TWAEV ppm: 3/7.5
LD50 ORAL: 620
SKIN (mg/kg): 1020
LC50ppm INHALATION: above 960

12. **TOXICOLOGICAL INFORMATION:** SKIN CONTACT: severely irritating; first degree burns on exposed skin
SKIN ABSORPTION: probably absorbed; severe local effect probably more harmful than absorption into the body
EYE CONTACT: severely irritating & corrosive; damages eyes rapidly; vapor may cause a "blue haze" around bright objects – reverses hours after last exposure
INHALATION: vapor irritating, but low vapor pressure greatly reduces risk of inhalation
Note: Vapor may cause lung damage including oedema & fluid exudation leading to shortness of breath, wheezing etc which may become life-threatening
INGESTION: may cause burns in mouth & throat; low oral toxicity, but may cause stomach pain, vomiting, diarrhoea, weakness, and shock (low blood pressure)
EFFECTS OF CHRONIC EXPOSURE
GENERAL: prolonged exposure may cause dermatitis & eczeme
SENSITISING: not known to be a sensitizer
REPRODUCTIVE EFFECT: no known effect in humans
SYNERGISTIC WITH: not known
ESTIMATED LD50: 1720mg/kg (oral, rat); 700mg/kg (oral, mouse), 620mg/kg (oral, guinea pig), 1000mg/kg (oral, rabbit); 1000mg/kg (skin, rabbit)
ESTIMATED LC50: above 960mg/kg 3

13. **ECOLOGICAL INFORMATION:** This product cannot accumulate in living tissue – This product is readily and rapidly biodegradable in the presence of oxygen; in water 71% degradation after 5 days; half-life in air estimated at 11 hours.

14. **DISPOSAL CONSIDERATIONS:** DO NOT FLUSH TO SEWER; may be incinerated in approved facility with flue gas monitoring and scrubbing

15. **CARCINOGENIC PROPERTIES & NOTIFICATIONS:** Not considered a tumorigen or a carcinogen in humans or animals

16. **TRANSPORT INFORMATION:** USA 49 CFR
Product identification number: UN – 2491
Shipping name: ehtanolamine
Classification: Class 3; Packing group III
Label: corrosive liquids, Class 8



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Class: B3, D 2B, E

17. **HANDLING & STORAGE:** Store and use a cool dry environment, away from sources of ignition, heat and oxidizing agents. Use with adequate ventilation. Do not cut, drill, weld or grind on or near this container. Avoid prolonged contact with skin and wash work clothes frequently. An eye bath and safety shower should be available near the workplace.
18. **ACCIDENTAL LEAK PRECAUTION:** dyke to control spillage and prevent environmental contamination
RELEASE HANDLING SPILL: ventilate contaminated area; recover free liquid with suitable pumps; absorb on an inert sorbent, sweep, shovel, & store in closed containers for recycling or disposal.
19. **REGULATORY INFORMATION:** IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH): 30ppm
OSHA STANDARDS
Permissible Exposure Limit: Table Z-1 8-hr Time Weighted Avg: 3ppm (6mg/cu m). Skin Designation. Vacated 1989 OSHA PEL TWA 3ppm (8mg/cu m); STEL 6ppm (15mg/cu m), is still enforced in some states.
NIOSH RECOMMENDATIONS
Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 3ppm (8mg/cu m). Recommended Exposure Limit: 15 Min Short-Term Exposure Limit: 6ppm (15mg/cu m).
THRESHOLD LIMIT VALUES
8 hr Time Weighted Avg (TWA): 3ppm; 15min Short Term Exposure Limit (STEL) 6ppm.
ATMOSPHERIC STANDARDS
This action promulgates standards of performance for equipment leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI). The intended effect of these standards is to require all newly constructed, modified, and reconstructed SOCMI process units to use the best demonstrated system of continuous emission reduction reduction for equipment leaks of VOC, considering costs, non air quality health and environmental impact and energy requirements. Ehtanolamines are produced, as an intermediate or final product, by process units covered under this subpart. /Ehtanolamines/
FIFRA REQUIREMENTS
Active Ingredients with Recent Production Pending Cancellation of all Products for Non-payment of 1990 Registration Fees: Ehtanolamine (CAS 141-43-5). Use: disinfectant/antimicrobial uses. Year last produces: 1989. Registration N. 058018-00001. Product Name: Pro Way Brand Realclean Spray Concentrate. /From Table2/
FDA REQUIREMENTS
Ehtanolamine is an indirect food additive for use only as a component of adhesives.