



MATERIAL SAFETY DATA SHEET

TRIMETHYLAMINE, 28%

Section 1: Chemical Product and Company Identification

Product Name: Trimethylamine, 28%

Contact Information:

Sparchem.

159, 2nd Floor, Ashoka Shopping Center.

L.T Marg, Mumbai 400001

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Water; Trimethylamine

Order Online: www.sparchem.com

CI#: Not available.

CHEMTREC (24HR Emergency Telephone), call:

9867502723

Synonym: Trimethylamine 28% Aqueous Solution

Chemical Name: Not applicable.

Chemical Formula: Not applicable.

Section 2: Composition and Information on Ingredients

Composition:

Toxicological Data on Ingredients: Trimethylamine: ORAL (LD50): Acute: 500 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects: Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, .

Hazardous in case of skin contact (corrosive), of eye contact (corrosive). Non-corrosive for lungs. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health 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.

Section 4: 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. Cold water may be used. Get medical attention immediately.

p. 1

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation.

WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: Not available.

Flash Points: OPEN CUP: 3.3°C (37.9°F).

Flammable Limits: LOWER: 2% UPPER: 11.6%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Non-flammable in presence of shocks, of oxidizing materials, of reducing materials, of combustible materials, of organic materials, of metals, of acids, of alkalis.

Explosion Hazards in Presence of Various Substances: Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Flammable liquid, soluble or dispersed in water.

SMALL FIRE: Use DRY chemical

powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: FLAMMABLE.

Special Remarks on Explosion Hazards: Potentially explosive reaction with bromine + heat, ethylene oxide, triethynyl-aluminum (Trimethylamine)

Section 6: Accidental Release Measures

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill: Flammable liquid. Corrosive liquid. Keep away from heat. Keep away from sources of ignition. 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.

Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

p. 2

Section 7: Handling and Storage

Precautions: Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing

material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage: Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 6°C (42.8°F).

Refrigerate

Section 8: 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 stations and safety showers are proximal to the work-station location.

Personal Protection: Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Gloves. Boots.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Trimethylamine TWA: 10 STEL: 15 (ppm) from OSHA (PEL) [United States] TWA: 5 STEL: 15 (ppm) from ACGIH (TLV) [United States] TWA: 2.4 (mg/m³) from AIHA [United States] TWA: 1 (ppm) from AIHA [United States] TWA: 24 STEL: 36 (mg/m³) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Ammoniacal. Fish.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Colorless.

pH (1% soln/water): Not available.

Boiling Point: 40°C (104°F) - 50 C

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 0.83 - 0.93(Water = 1)

Vapor Pressure: 46.1 kPa (@ 20°C)

Vapor Density: 2.04 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

p. 3

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether.

Solubility: Easily soluble in cold water, hot water. Soluble in diethyl ether.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatible materials

Incompatibility with various substances: Slightly reactive to reactive with oxidizing agents, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Incompatible with ethylene oxide, bromine, nitrosating agents (sodium nitrate), chlorine, reactive organic compounds, some metals, mercury.

Special Remarks on Corrosivity: Corrosive to many metals (zinc, brass, aluminum, copper). (Trimethylamine)

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 2083 mg/kg (Rat) (Calculated value for the mixture).

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Very hazardous in case of skin contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive).

Special Remarks on Toxicity to Animals: Lowest Published Lethal Dose: LDL[Rat] -

Route: Inhalation; Dose 3500 ppm/4 hours (Trimethylamine)

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects based on animal test data

Special Remarks on other Toxic Effects on Humans: Acute Potential Health Effects:

Skin: Causes severe skin irritation and

ulcerations/burns. Eyes: Causes severe irritation and burns. Contact may cause conjunctival ulceration and hemorrhages and

corneal ulceration, edema and opacities. Ingestion: Harmful if swallowed. May cause severe gastrointestinal tract irritation and

possible burns. Symptoms may include nausea, vomiting, burning sensation in the mouth, throat and stomach, pain on

swallowing, swelling of the throat, profuse salivation, diarrhea, rapid breathing, risk of gastrointestinal hemorrhage, and

perforation. It may affect behavior/nervous system, cardiovascular system (shock -rapid, weak pulse, cold sweat, pale

complexion, lightheadness, and cold hands and feet), blood. Inhalation: May cause severe irritation of the respiratory tract with

sore throat, tingling sensation in the respiratory tract, irritation of nose and eyes, coughing, shortness of breath and delayed

lung edema. Inhalation may also affect behavior/central nervous system (excitement, somnolence, spasticity). Chronic
Potential Health Effects: Skin: Repeated or prolonged skin contact may cause dermatitis.
Inhalation: Repeated or prolonged
inhalation may affect behavior/central nervous system, respiration (fibrosis, pneumoconiosis, pulmonary edema, chemical bronchitis)), and blood (changes in red blood cell count), and metabolism (weight loss), and endocrine system (adrenal gland).

Section 12: Ecological Information

Ecotoxicity: Not available.

p. 4

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid. Class 8: Corrosive material

Identification: : Trimethylamine, aqueous solution UNNA: 1297 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations: Connecticut hazardous material survey.: Trimethylamine Illinois toxic substances disclosure

to employee act: Trimethylamine Illinois chemical safety act: Trimethylamine New York release reporting list: Trimethylamine

Rhode Island RTK hazardous substances: Trimethylamine Pennsylvania RTK:

Trimethylamine Minnesota: Trimethylamine

Massachusetts RTK: Trimethylamine Massachusetts spill list: Trimethylamine New

Jersey: Trimethylamine New Jersey spill

list: Trimethylamine New Jersey toxic catastrophe prevention act: Trimethylamine

Louisiana spill reporting: Trimethylamine

TSCA 8(b) inventory: Water; Trimethylamine CERCLA: Hazardous substances.:

Trimethylamine: 100 lbs. (45.36 kg);

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS E: Corrosive liquid.

DSCL (EEC):

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 3

Reactivity: 0

Personal Protection:

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 3

Reactivity: 0

Specific hazard:

p. 5

Protective Equipment: Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Face shield.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 12:09 AM

Last Updated: 11/06/2008 12:00 PM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall SPARCHEM be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if SPARCHEM has been advised of the possibility of such damages.

www.sparchem.com