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Material Safety Data Sheet m-Toluidine MSDS

Section 1: Chemical Product and Company Identification

Product Name: m-Toluidine

Catalog Codes: SLT4096

CAS#: 108-44-1

RTECS: XU2800000

TSCA: TSCA 8(b) inventory: m-Toluidine

CI#: Not available.

Synonym: 3-Aminotoluene; 3-Methylaniline; 3-Amino-1-methylbenzene; 3-Aminophenylmethane; 3-Methylbenzenamine; 3-Toluidine; Aniline, 3-methyl-; Benzenamine, 3-methyl-; m-Aminotoluene; m-Methylaniline; m-Methylbenzenamine; M-Tolylamine

Chemical Name: m-Toluidine

Chemical Formula: C7-H9-N

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
{m-}Toluidine	108-44-1	100

Toxicological Data on Ingredients: m-Toluidine: ORAL (LD50): Acute: 450 mg/kg [Rat]. 740 mg/kg [Mouse]. 750 mg/kg [Rabbit]. DERMAL (LD50): Acute: 3250 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator). Severe over-exposure can result in death.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, the nervous system, skin, eyes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

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. WARM water MUST be used. Get medical attention.

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. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact: Not available.

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 immediate medical attention.

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Combustible.

Auto-Ignition Temperature: 482°C (899.6°F)

Flash Points: CLOSED CUP: 86.111°C (187°F).

Flammable Limits: Not available.

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

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

Explosion Hazards in Presence of Various Substances:

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. Slightly explosive in presence of heat.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:

Toluidine in Triethylamine solution are ignited rapidly by fuming Nitric acid at temperatures of minus 76 deg. C or lower.

Special Remarks on Explosion Hazards:

When heated vapors may form explosive mixtures with air. Containers may explode then heated.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Combustible material. Poisonous liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:

Keep locked up.. 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. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids.

Storage:

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).

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:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

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:

TWA: 2 (ppm) from ACGIH (TLV) [United States] SKIN TWA: 2 (ppm) from OSHA (PEL) [United States] SKIN TWA: 9 (mg/m³) from OSHA (PEL) [United States] SKIN TWA: 2 (ppm) [Canada] SKIN TWA: 8.8 (mg/m³) [Canada] SKIN Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Aromatic. Amine like.

Taste: Not available.

Molecular Weight: 107.16 g/mole

Color: Colorless to light yellow.

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

Boiling Point: 203.3°C (397.9°F)

Melting Point: -31.2°C (-24.2°F)

Critical Temperature: Not available.

Specific Gravity: 0.99 (Water = 1)

Vapor Pressure: Not available.

Vapor Density: 3.7 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 1.4

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:

Soluble in diethyl ether, acetone. Very slightly soluble in cold water. Very soluble in ethanol, benzene. Infinitely soluble in Carbon Tetrachloride, Heptane. Solubility in water: 1.5×10^4 mg/l

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: Reactive with oxidizing agents, acids.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

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): 450 mg/kg [Rat]. Acute dermal toxicity (LD50): 3250 mg/kg [Rabbit].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. May cause damage to the following organs: blood, kidneys, the nervous system, skin, eyes, central nervous system (CNS).

Other Toxic Effects on Humans:

Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. It may be absorbed through the skin and affect behavior/central nervous system (CNS) causing CNS depression. Absorption into the body can also lead to Methemoglobinemia (interference with the ability of the blood to carry oxygen) which causes cyanosis, a bluish discoloration the skin and lips due to defficient oxygenation of the blood. Eyes: Causes eye irritation. Inhalation: It may cause anoxia characterized by CNS depression (nausea, weakness, headache, dizziness, drowsiness, convulsions, unconciousness, confusion), methemoglobinemia (interference with the ability of the blood to carry oxygen) which causes cyanosis (a bluish discoloration of the skin and lips), shortness of breath, rapid heart rate, and chocolate-brown colored blood. It may even cause coma and death. Ingestion: Harmful if swallowed. May cause nausea, vomiting, diarrhea, and loss of appetite, Methemoglobinemia. Symptoms may include weakness, headache, drowsiness, dyspnea, cyanosis, chocolate-brown colored blood, hypotension, rapid heart rate, and jaundice, and other symptoms similar to that of inhalation. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause defatting dermatitis. Inhalation and Ingestion: Prolonge or repeated ingestion and inhalation may cause anorexia, and kidney and bladder damage causing painful bloody urine. May damage the nervous system causing symptoms similar to acute inhalation and ingestion. It may also affect the blood causing Methemoglobinemia, cyanosis, and anemia.

Section 12: Ecological Information

Ecotoxicity: Not available.

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 6.1: Poisonous material.

Identification: : Toluidine UNNA: 1708 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Illinois toxic substances disclosure to employee act: m-Toluidine Pennsylvania RTK: m-Toluidine Minnesota: m-Toluidine Massachusetts RTK: m-Toluidine New Jersey: m-Toluidine California Director's List of Hazardous Substances: m-Toluidine TSCA 8(b) inventory: m-Toluidine TSCA 8(a) PAIR: m-Toluidine TSCA 8(d) H and S data reporting: m-Toluidine: effective date: 3/11/94; Sunset date: 6/30/98

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).

DSCL (EEC):

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: h

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

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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