GARDENA, CA
NEW BRUNSWICK, NJ

# Material Safety Data Sheet

| NFPA | HMIS | Personal Protective Equipment |
|---|---|---|
|  | Health Hazard 2<br>Fire Hazard 2<br>Reactivity 0 |  <br>See Section 15. |

## Section 1. Chemical Product and Company Identification



| | |
|---|---|
| **Common Name/ Trade Name** | **m-Toluidine** |
| **Manufacturer** | SPECTRUM LABORATORY PRODUCTS INC.<br>14422 S. SAN PEDRO STREET<br>GARDENA, CA 90248 |
| **Commercial Name(s)** | 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 Family** | Not available. |
| **Chemical Formula** | C7-H9-N |
| **Supplier** | SPECTRUM LABORATORY PRODUCTS INC.<br>14422 S. SAN PEDRO STREET<br>GARDENA, CA 90248 |

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|---|---|
| **Catalog Number(s).** | T2501 |
| **CAS#** | 108-44-1 |
| **RTECS** | XU2800000 |
| **TSCA** | TSCA 8(b) inventory: m-Toluidine |
| **CI#** | Not available. |

**IN CASE OF EMERGENCY**
**CHEMTREC (24hr) 800-424-9300**

CALL (310) 516-8000

## Section 2.Composition and Information on Ingredients

| | | Exposure Limits | | | |
|---|---|---|---|---|---|
| **Name** | **CAS #** | **TWA (mg/m³)** | **STEL (mg/m³)** | **CEIL (mg/m³)** | **% by Weight** |
| 1) {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.

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| **Potential Chronic Health Effects** | **CARCINOGENIC EFFECTS**: A4 (Not classifiable for human or animal.) by ACGIH.<br>**MUTAGENIC EFFECTS**: Not available.<br>**TERATOGENIC EFFECTS**: Not available.<br>**DEVELOPMENTAL TOXICITY**: Not available.<br>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

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| **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

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| **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.<br>Risks of explosion of the product in presence of static discharge: Not available.<br>Slightly explosive in presence of heat. |
| **Fire Fighting Media and Instructions** | SMALL FIRE: Use DRY chemical powder.<br>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 tempertures of minus 76 deg. C or lower. |
| **Special Remarks on Explosion Hazards** | When heated vapors may form explosive mixtures with air.<br>Containers may explode then heated. |

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## Section 6. Accidental Release Measures

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| **Small Spill** | Absorb with an inert material and put the spilled material in an appropriate waste disposal. |
| **Large Spill** | Combustible material. Poisonous liquid.<br>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

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| **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

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| **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<br>TWA: 2 (ppm) from OSHA (PEL) [United States] SKIN<br>TWA: 9 (mg/m$^3$) from OSHA (PEL) [United States] SKIN<br>TWA: 2 (ppm) [Canada] SKIN<br>TWA: 8.8 (mg/m$^3$) [Canada] SKIN<br><br>Consult local authorities for acceptable exposure limits. |

## Section 9. Physical and Chemical Properties

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| **Physical state and appearance** | Liquid. | **Odor** | Aromatic. Amine like. |
| **Molecular Weight** | 107.16 g/mole | **Taste** | Not available. |
| **pH (1% soln/water)** | Not available. | **Color** | Colorless to light yellow. |
| **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. | | |

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| **Solubility** | Soluble in diethyl ether, acetone.<br>Very slightly soluble in cold water.<br>Very soluble in ethanol, benzene.<br>Infinitely soluble in Carbon Tetrachloride, Heptane.<br>Solubility in water: 1.5X10+4 mg/l |

## Section 10. Stability and Reactivity Data

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| **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

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| **Routes of Entry** | Absorbed through skin. Eye contact. Inhalation. Ingestion. |
| **Toxicity to Animals** | Acute oral toxicity (LD50): 450 mg/kg [Rat].<br>Acute dermal toxicity (LD50): 3250 mg/kg [Rabbit]. |
| **Chronic Effects on Humans** | **CARCINOGENIC EFFECTS**: A4 (Not classifiable for human or animal.) by ACGIH.<br>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.<br>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:<br>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.<br>Eyes: Causes eye irritation.<br>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.<br>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.<br>Chronic Potential Health Effects:<br>Skin: Prolonged or repeated skin contact may cause defatting dermatitis.<br>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. |

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## Section 12. Ecological Information

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| **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

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| **DOT Classification** | CLASS 6.1: Poisonous material. |
| **Identification** | : Toluidine UNNA: 1708 PG: II |
| **Special Provisions for Transport** | Not available. |
| **DOT (Pictograms)** |   |

## Section 15. Other Regulatory Information and Pictograms

**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

**California Proposition 65 Warnings**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**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)**

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R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
R33- Danger of cumulative effects.
R50- Very toxic to aquatic organisms.

S28- After contact with skin, wash immediately with plenty of [***]
S36/37- Wear suitable protective clothing and gloves.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S50- Do not mix with [***]
S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

## HMIS (U.S.A.)

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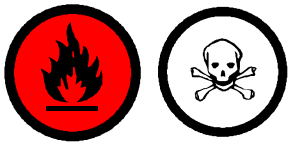
| Health Hazard | 2 |
| Fire Hazard | 2 |
| Reactivity | 0 |
| Personal Protection | h |

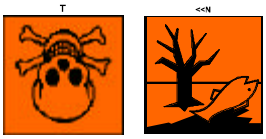
## National Fire Protection Association (U.S.A.)


Health
Flammability
Reactivity
Specific hazard

## WHMIS (Canada) (Pictograms)



## DSCL (Europe) (Pictograms)



## TDG (Canada) (Pictograms)

## ADR (Europe) (Pictograms)

## 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.

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## Section 16. Other Information

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| **MSDS Code** | **4565T** |
| **References** | Not available. |
| **Other Special Considerations** | Not available. |

**Validated by Sonia Owen on 8/11/2006.**

**Verified by Sonia Owen.**

**Printed 9/13/2006.**

**CALL (310) 516-8000**

**Notice to Reader**

*All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.*