

# Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
  	<p>Toxic compound, do not ingest or inhale. Avoid all contact with this material.</p> <p>Irritating to skin, eyes, and the respiratory system.</p> <p>Combustible material; avoid heat and sources of ignition.</p> <p>Environmental hazard.</p> <p>This material is toxic to aquatic organisms.</p>	   

## Section I. Chemical Product and Company Identification

Chemical Name	<b>m-Toluidine</b>		
Catalog Number	T0298	Supplier	TGI America 9211 N. Harborgate St. Portland OR 1-800-423-8616
Synonym	Not available.		
Chemical Formula	C <sub>7</sub> H <sub>9</sub> N		
CAS Number	108-44-1	In case of Emergency Call	<b>Chemtrec®</b> <b>(800) 424-9300 (U.S.)</b> <b>(703) 527-3887 (International)</b>

## Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
m-Toluidine	108-44-1	Min. 98.0 (GC)	Not available.	Rat LD <sub>50</sub> (oral) 450 mg/kg Rabbit LD <sub>50</sub> (dermal) 3250 mg/kg Mouse LD <sub>50</sub> (oral) 740 mg/kg Mouse LD <sub>50</sub> (intraperitoneal) 116 mg/kg

## Section III. Hazards Identification

Acute Health Effects	<p>Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death.</p> <p>Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.</p> <p>Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.</p>
Chronic Health Effects	<p><b>CARCINOGENIC EFFECTS</b> : Not available.</p> <p><b>MUTAGENIC EFFECTS</b> : Not available.</p> <p><b>TERATOGENIC EFFECTS</b> : Not available.</p> <p><b>DEVELOPMENTAL TOXICITY</b>: Not available.</p> <p>Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.</p>

## Section IV. 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. 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. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

## Section V. Fire and Explosion Data

Flammability	Combustible.	Auto-Ignition	482°C (899.6°F)
Flash Points	86°C (186.8°F).	Flammable Limits	LOWER: 1.1% UPPER: 6.6%
Combustion Products	These products are toxic carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO <sub>x</sub> ).		
Fire Hazards	Not available.		
Explosion Hazards	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.		

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Emergency phone number (800) 424-9300

Fire Fighting Media and Instructions  
 Combustible liquid.  
 SMALL FIRE: Use DRY chemical powder.  
 LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.  
 Consult with local fire authorities before attempting large scale fire-fighting operations.

### Section VI. Accidental Release Measures

Spill Cleanup Instructions  
 Toxic material. Irritating material. Combustible material. Environmentally hazardous material.  
 Keep away from heat. Mechanical exhaust required. 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. Consult federal, state, and/or local authorities for assistance on disposal.

### Section VII. Handling and Storage

Handling and Storage Information  
 TOXIC. IRRITANT. COMBUSTIBLE. ENVIRONMENTAL HAZARD. Keep locked up. Keep away from heat. Mechanical exhaust required. Avoid excessive heat and light. DO NOT ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively.

### Section VIII. 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 station and safety shower is proximal to the work-station location.

Personal Protection  
 Splash goggles. Lab coat. Vapor respirator. Boots. Gloves. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



Exposure Limits  
 Not available.

### Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid. (Clear, colorless-Reddish yellow.)	Solubility	Very soluble in ethanol, ether, heptane, benzene, acetone, carbon tetrachloride. Soluble in other organic solvents. Slightly soluble in water.
Specific Gravity	0.99 (water=1)		
Molecular Weight	107.15	Partition Coefficient	Not available.
Boiling Point	203°C (397.4°F)	Vapor Pressure	0.13 (@ 20°C)
Melting Point	-30°C (-22°F)	Vapor Density	3.72 (Air = 1)
Refractive Index	1.566 - 1.570	Volatility	Not available.
Critical Temperature	Not available.	Odor	Aromatic. (Slight.)
Viscosity	Not available.	Taste	Not available.

### Section X. Stability and Reactivity Data

Stability  
 This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability  
 Avoid excessive heat and light.

Incompatibilities  
 Reactive with strong oxidizing agents.

### Section XI. Toxicological Information

RTECS Number  
 XU2800000

Routes of Exposure  
 Eye Contact. Ingestion. Inhalation.

Toxicity Data  
 Rat LD<sub>50</sub> (oral) 450 mg/kg  
 Rabbit LD<sub>50</sub> (dermal) 3250 mg/kg  
 Mouse LD<sub>50</sub> (oral) 740 mg/kg  
 Mouse LD<sub>50</sub> (intraperitoneal) 116 mg/kg

Chronic Toxic Effects  
**CARCINOGENIC EFFECTS** : Not available.  
**MUTAGENIC EFFECTS** : Not available.  
**TERATOGENIC EFFECTS** : Not available.  
**DEVELOPMENTAL TOXICITY**: Not available.  
 Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Acute Toxic Effects  
 Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death.  
 Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.  
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Emergency phone number (800) 424-9300

**Section XII. Ecological Information**

Ecotoxicity	Not available.
Environmental Fate	3-Aminotoluene's production and use as a dye and chemical intermediate may result in its release to the environment through various waste streams. If released to air, a vapor pressure of 0.30 mm Hg at 25 deg C indicates 3-aminotoluene will exist solely as a vapor in the ambient atmosphere. Vapor-phase 3-aminotoluene will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 2 hours. Direct photolysis may also occur. If released to soil, 3-aminotoluene is expected to have high mobility based upon a mean Koc of 44 in 4 silt loams. A pKa value of 4.7 suggests that 3-aminotoluene will partially exist in the protonated form in aqueous environments and the protonated form of 3-aminotoluene is expected to bind strongly to soil surfaces. Volatilization from moist soil surfaces is expected to be an important fate process for the neutral species based upon an estimated Henry's Law constant of 2.8X10 <sup>-6</sup> atm-cu m/mole. 3-Aminotoluene is not expected to volatilize from dry soil surfaces based upon its vapor pressure. 3-Aminotoluene was completely biodegraded within 8 days in a soil inoculum. If released into water, 3-aminotoluene is not expected to adsorb to suspended solids and sediment in water based upon the mean Koc. Volatilization from water surfaces is expected to be an important fate process for the neutral species based upon this compound's estimated Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 9 and 101 days, respectively. 3-Aminotoluene is expected to biodegrade rapidly in water based upon a number of aerobic aqueous biodegradation screening studies and river die-away tests. An estimated BCF of 2 suggests the potential for bioconcentration in aquatic organisms is low. Occupational exposure to 3-aminotoluene may occur through inhalation and dermal contact with this compound at workplaces where 3-aminotoluene is produced or used.

**Section XIII. Disposal Considerations**

Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.
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**Section XIV. Transport Information**

DOT Classification	DOT CLASS 6.1: Toxic material.
PIN Number	UN1708
Proper Shipping Name	Toluidines, liquid
Packing Group (PG)	II
DOT Pictograms	

**Section XV. Other Regulatory Information and Pictograms**

TSCA Chemical Inventory (EPA)	This compound is <b>ON</b> the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	On DSL
EINECS Number (EEC)	203-583-1
EEC Risk Statements	R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin. R51- Toxic to aquatic organisms.
Japanese Regulatory Data	ENCS No. 3-186

**Section XVI. Other Information**

**Version 1.0**  
**Validated on 11/11/2005.**  
**Printed 11/11/2005.**

**Notice to Reader**

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.