

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
  	<p>Combustible material; avoid heat and sources of ignition. Toxic compound, do not ingest or inhale. Avoid all contact with this material. Irritating to skin, eyes, and the respiratory system. Air and light sensitive material. Store under nitrogen. POSSIBLE CARCINOGEN. MINIMIZE EXPOSURE.</p>	   

Section I. Chemical Product and Company Identification

Chemical Name	o-Toluidine		
Catalog Number	T0299	Supplier	TCI America 9211 N. Harbortgate St. Portland OR 1-800-423-8616
Synonym	1-Amino-2-methylbenzene		
Chemical Formula	CH ₃ C ₆ H ₄ NH ₂		
CAS Number	95-53-4	In case of Emergency Call	Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
o-Toluidine	95-53-4	Min. 99.0 (GC,T)	This chemical is classified as a possible carcinogen. There is no acceptable exposure limit for a carcinogen.	Rat LD ₅₀ (oral) 670 mg/kg Man LC _{Lo} (inhalation) 25 mg/m ³ Mouse LD ₅₀ (intraperitoneal) 150 mg/kg Rat LC ₅₀ (inhalation) 862 ppm/4H Rabbit LD ₅₀ (dermal) 3250 mg/kg Mouse LD ₅₀ (oral) 520 mg/kg

Section III. Hazards Identification

Acute Health Effects	Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death. Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours. 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. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	<p>CARCINOGENIC EFFECTS : Possible carcinogen. (sufficient evidence in animals, no adequate data in humans) Tumorigenic: Rat (oral) 109000 mg/kg/2Y-C. Neoplastic by RTECS criteria. Tumorigenic: Rat (oral) 7250 mg/kg/23W-C. Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Rabbit (subcutaneous) 840 mg/kg/14W-I. Equivocal tumorigenic agent by RTECS criteria.</p> <p>MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available.</p> <p>DEVELOPMENTAL TOXICITY: Reproductive effects: Rat (dermal) 952 mg/kg. Duration: female- 17 weeks prior to mating. Maternal effects: ovaries, fallopian tubes, menstrual cycle changes or disorders. Rat (dermal) 9520 mg/kg. Duration: male- 17 weeks prior to mating. Paternal effects: spermatogenesis. Effects on newborn: Physical. 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. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Flush eyes with running water for a minimum of 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention. Treat symptomatically and supportively.
Skin Contact	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. Seek medical attention. Treat symptomatically and supportively. Wash any contaminated clothing before reusing.
Inhalation	If the victim is not breathing, perform artificial respiration. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention. Treat symptomatically and supportively.
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, administer artificial respiration. 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. Seek immediate medical attention and, if possible, show the chemical label. Treat symptomatically and supportively.

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Emergency phone number (800) 424-9300

Section V. Fire and Explosion Data			
Flammability	Combustible.	Auto-Ignition	Not available.
Flash Points	84°C (183.2°F).	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂).		
Fire Hazards	Slightly flammable to flammable in presence of open flames and sparks, of shocks, of heat.		
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. No additional information is available regarding the risks of explosion.		
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO ₂ , water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.		

Section VI. Accidental Release Measures	
Spill Cleanup Instructions	Combustible material. Toxic liquid. Irritating liquid. Keep away from heat and sources of ignition. 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. Eliminate all sources of ignition. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage	
Handling and Storage Information	COMBUSTIBLE. TOXIC. IRRITANT. AIR AND LIGHT SENSITIVE. STORE UNDER NITROGEN. Handle with caution and minimize exposure. Keep away from heat and sources of ignition. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. Avoid contact with skin and eyes. Always store away from incompatible compounds such as oxidizing agents, acids.

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	This chemical is classified as a possible carcinogen. There is no acceptable exposure limit for a carcinogen.

Section IX. Physical and Chemical Properties			
Physical state @ 20°C	Light yellow liquid.	Solubility	Soluble in diethyl ether, alcohol, dilute acids. Partially soluble in cold water, hot water.
Specific Gravity	1 (water=1)	Partition Coefficient	Not available.
Molecular Weight	107.16	Vapor Pressure	0.26 mm of Hg (@ 25°C)
Boiling Point	199 to 200°C (390.2 to 392°F)	Vapor Density	3.7 (Air = 1)
Melting Point	-28°C (-18.4°F)	Volatility	Not available.
Refractive Index	1.5688 @ 20°C	Odor	Aromatic, aniline like odor.
Critical Temperature	421°C (789.8°F)	Taste	Not available.
Viscosity	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	Air and light sensitive. Avoid excessive heat and light.
Incompatibilities	Reactive with oxidizing agents, acids.

Section XI. Toxicological Information

RTECS Number	XU2975000
Routes of Exposure	Eye contact. Inhalation. Ingestion. Skin contact.
Toxicity Data	Rat LD ₅₀ (oral) 670 mg/kg Man LC ₅₀ (inhalation) 25 mg/m ³ Mouse LD ₅₀ (intraperitoneal) 150 mg/kg Rat LC ₅₀ (inhalation) 862 ppm/4H Rabbit LD ₅₀ (dermal) 3250 mg/kg Mouse LD ₅₀ (oral) 520 mg/kg
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Acute Toxic Effects	Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death. Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours. 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. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	2-Aminotoluene may be released in wastewater during its production and use in the manufacture of dyes and other chemicals. It is also released during the thermal degradation of polyurethane products. Some vegetables and tobacco contain 2-aminotoluene. If released on land, 2-aminotoluene will be lost by a combination of biodegradation, oxidation, and chemical binding to soil components. If released into water, it will also be primarily lost by biodegradation, oxidation and photooxidation. There will also be some adsorption to sediment. Bioconcentration in fish should not be an important fate process. In the atmosphere, 2-aminotoluene will photodegrade (estimated half-life 2.4 hr). Exposure to 2-aminotoluene will be primarily occupational. However, the general public may be exposed from ingesting some food items and from tobacco smoke, although data are limited. (HSDB)

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local or 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 this 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 ON the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	WHMIS CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). WHMIS CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
EINECS Number (EEC)	202-429-0
EEC Risk Statements	R22- Harmful if ingested. R36/37/38- Irritating to eyes, respiratory system and skin.
Japanese Regulatory Data	Not available.

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Section XVI. Other Information**Version 1.0****Validated on 6/29/2007.****Printed 6/29/2007.****Notice to Reader**

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