

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>Environmental hazard.</p> <p>This material is toxic to aquatic organisms and may cause long term adverse effects to the aquatic environment.</p> <p>Irritating to skin, eyes, and the respiratory system.</p> <p>Light sensitive material.</p> <p>Air sensitive material.</p> <p>Store under argon.</p>	

Section I. Chemical Product and Company Identification

Chemical Name	p-Anisidine		
Catalog Number	A0487	Supplier	TCI America 9211 N. Harborside St. Portland OR 1-800-423-8616
Synonym	4-Methoxyaniline		
Chemical Formula	C ₇ H ₉ NO		
CAS Number	104-94-9	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
p-Anisidine	104-94-9	Min. 98.0 (GC, T)	Not available.	Rat LD ₅₀ (intraperitoneal) 1400 mg/kg Rat LD ₅₀ (oral) 1320 mg/kg Mouse LD ₅₀ (intraperitoneal) 806 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. 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>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.</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	May be combustible at high temperature.	Auto-Ignition	515 °C (959 °F)
Flash Points	122 °C (251.6 °F).	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂).		
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.		

Continued on Next Page

Emergency phone number (800) 424-9300

Fire Fighting Media
and Instructions

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 MeasuresSpill Cleanup
Instructions

Toxic material. Environmentally hazardous material. Irritating material. Light sensitive material. Air sensitive material.
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 StorageHandling and Storage
Information

TOXIC. ENVIRONMENTAL HAZARD. IRRITANT. LIGHT SENSITIVE. AIR SENSITIVE. STORE UNDER ARGON. Keep locked up. Keep away from heat. 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 dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. Always store away from incompatible compounds such as oxidizing agents, acids.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Splash goggles. Lab coat. Dust 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	Solid. (Crystal, powder. White, pale yellow, dark brown.)	Solubility	Soluble in acetone, benzene, methanol, water. Very soluble in alcohol, ether.
Specific Gravity	1.089 (water=1)		
Molecular Weight	123.15	Partition Coefficient	LOG P _{ow} : 0.95
Boiling Point	240 to 243 °C (464 to 469.4 °F)	Vapor Pressure	0.8Pa/25 °C
Melting Point	56 to 59 °C (132.8 to 138.2 °F)	Vapor Density	4.28 (Air = 1)
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Amine like.
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. Air sensitive.

Incompatibilities

Reactive with oxidizing agents, acids (including acid chlorides, acid anhydrides).

Section XI. Toxicological Information

RTECS Number

BZ5450000

Routes of Exposure

Eye Contact. Ingestion. Inhalation.

Toxicity Data

Rat LD₅₀ (intraperitoneal) 1400 mg/kg
Rat LD₅₀ (oral) 1320 mg/kg
Mouse LD₅₀ (intraperitoneal) 806 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.
Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity Not available.

Environmental Fate p-Anisidine's production and use as an intermediate in the manufacturing of azo dyes may result in its release to the environment through various waste streams. If released to air, a vapor pressure of 3.0X10⁻² mm Hg at 20 deg C indicates p-anisidine will exist solely as a vapor in the ambient atmosphere. Vapor-phase p-anisidine 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 6 hours. Aniline has been shown to undergo indirect photolysis in natural waters containing humic acids, therefore it is expected that p-anisidine may also undergo indirect photolysis in natural water. If released to soil, p-anisidine is expected to have high mobility based upon an estimated Koc of 78. However, p-anisidine is expected to bind irreversibly to humic materials, making it immobile in soils where humic materials are present. p-Anisidine has a pKa of 5.34, indicating it will partially exist in the protonated form under acidic conditions and cations generally adsorb to organic carbon and clay more strongly than their neutral counterparts. Volatilization from moist soil surfaces is not expected to be an important fate process based upon a Henry's Law constant of 6.60X10⁻⁸ atm-cu m/mole. p-Anisidine is not expected to volatilize from dry soil surfaces based upon its vapor pressure. p-Anisidine is expected to biodegrade rapidly under aerobic conditions except when microorganisms are killed by high concentrations of the compound. If released to water, p-anisidine may react with either photochemically generated oxidants found in natural sunlight water or it may bond strongly with any humic materials found in suspended solids and sediments. Volatilization from water surfaces is not expected to be an important fate process based upon this compound's Henry's Law constant. Occupational exposure to p-anisidine may occur through inhalation and dermal contact with this compound at workplaces where p-anisidine 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.

Section XIV. Transport Information

DOT Classification DOT CLASS 6.1: Toxic material.

PIN Number UN2431

Proper Shipping Name Anisidines

Packing Group (PG) III

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) CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).
On DSL.

EINECS Number (EEC) 203-254-2

EEC Risk Statements R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
R51- Toxic to aquatic organisms.
R53- May cause long-term adverse effects in the aquatic environment.
R36/37/38- Irritating to eyes, respiratory system and skin.

Japanese Regulatory Data ENCS no.: 3-682

Section XVI. Other Information

Version 1.0
Validated on 4/21/2011.
Printed 4/21/2011.

Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, household, 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.