








Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
  	<p>Flammable 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. Hygroscopic -- keep container tightly sealed. Light sensitive material. Store under inert gas.</p>	   

Section I. Chemical Product and Company Identification

Chemical Name	2,6-Lutidine		
Catalog Number	L0067	Supplier	TCI America 9211 N. Harborage St. Portland OR 1-800-423-8616
Synonym	Pyridine, 2,6-dimethyl- (CA INDEX NAME); 2,6-Dimethylpyridine		
Chemical Formula	C ₇ H ₉ N		
CAS Number	108-48-5	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
2,6-Lutidine	108-48-5	Min. 98.0 (GC)	Not available.	Rat LD ₅₀ (oral) 400 mg/kg Guinea Pig LD ₅₀ (dermal) 2500 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. 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	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.

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	Flammable.	Auto-Ignition	Not available.
Flash Points	33°C (91.4°F)	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO ₂), nitrogen oxides (NO _x).		
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.		
Fire Fighting Media and Instructions	Flammable liquid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Continued on Next Page

Emergency phone number (800) 424-9300

Section VI. Accidental Release Measures

Spill Cleanup Instructions
 Flammable material. Toxic material. Irritating material. Hygroscopic material. Light sensitive material.
 Keep away from heat. Mechanical exhaust required. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. 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
 FLAMMABLE. TOXIC. IRRITANT. HYGROSCOPIC. LIGHT SENSITIVE. STORE UNDER INERT GAS. 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.
 Always store away from incompatible compounds such as oxidizing agents, acids, moisture.

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. (Oily clear, colorless.)	Solubility	Miscible with dimethylformamide, tetrahydrofuran.
Specific Gravity	0.92 (water=1)		Soluble in water (300g/L @34 °C), alcohol, ether, acetone.
Molecular Weight	107.15	Partition Coefficient	LOG P _{ow} : 1.68
Boiling Point	144°C (291.2°F)	Vapor Pressure	0.8 kPa (@ 25°C)
Melting Point	-6°C (21.2°F)	Vapor Density	3.7 (Air = 1)
Refractive Index	1.50	Volatility	Not available.
Critical Temperature	Not available.	Odor	Odor of pyridine and peppermint.
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. Hygroscopic; keep container tightly closed. Sensitive to light. Store under inert gas.

Incompatibilities
 Reactive with oxidizing agents, acids, acid chlorides, chloroformates, moisture.

Section XI. Toxicological Information

RTECS Number
 OK9700000

Routes of Exposure
 Eye Contact. Ingestion. Inhalation.

Toxicity Data
 Rat LD₅₀ (oral) 400 mg/kg
 Guinea Pig LD₅₀ (dermal) 2500 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 2,6-Lutidine's production and use as a chemical intermediate in the production of pharmaceuticals, resins, dyestuffs, rubber accelerators and insecticides may result in its release to the environment through various waste streams. If released to air, a vapor pressure of 5.65 mm Hg at 25 deg C indicates 2,6-lutidine will exist solely as a vapor in the ambient atmosphere. Vapor-phase 2,6-lutidine 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 days. If released to soil, 2,6-lutidine is expected to have moderate mobility based upon an estimated Koc of 200. The pKa of 2,6-lutidine is 6.6, which indicates that 2,6-lutidine will partially exist in the protonated form in moist soils and cations adsorb to soil surfaces more strongly than neutral compounds. Volatilization from moist soil surfaces is expected to be an important fate process for the neutral species based upon a Henry's Law constant of 1.04×10^{-5} atm-cu m/mole. 2,6-Lutidine may volatilize from dry soil surfaces based upon its vapor pressure. 2,6-Lutidine is expected to undergo slow biodegradation under aerobic conditions. The half-life of 2,6-lutidine in an unpolluted surface soil was approximately 1 month under aerobic conditions with 100% degradation observed after 3 months; in another soil, complete biodegradation occurred in 32 days. Little degradation was observed under denitrifying and sulfate-reducing conditions. If released into water, 2,6-lutidine is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Volatilization from water surfaces is expected to be an important fate process for the neutral species based upon this compound's Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 2 and 31 days, respectively. The protonated form of 2,6-lutidine will not volatilize. An estimated BCF of 4 suggests the potential for bioconcentration in aquatic organisms is low. Occupational exposure to 2,6-lutidine may occur through inhalation and dermal contact with this compound at workplaces where 2,6-lutidine is produced or used. Monitoring data indicate that the general population may be exposed to 2,6-lutidine via ingestion of food and drinking water. Since this compound is a constituent of coal tar and coal tar creosote, the general population may be exposed to 2,6-lutidine from consumer products which contain coal tar or coal tar creosote.

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 3: Flammable liquid.

PIN Number UN1993

Proper Shipping Name Flammable liquids, n.o.s.

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 B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).
On DSL.

EINECS Number (EEC) 203-587-3

EEC Risk Statements R10- Flammable.
R18- In use, may form flammable/explosive vapor-air mixture.
R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
R36/37/38- Irritating to eyes, respiratory system and skin.

Japanese Regulatory Data ENCS No. 5-712

Section XVI. Other Information

Version 1.0
Validated on 12/1/2009.
Printed 12/1/2009.

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.