

# 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>Environmental hazard.</p> <p>This material is toxic to aquatic organisms and may cause long term adverse effects to the aquatic environment.</p> <p>Dust explosion hazard.</p> <p>Moisture sensitive material.</p> <p>Light sensitive material.</p> <p>Store under argon.</p>	   

## Section I. Chemical Product and Company Identification

Chemical Name	<b>2-Aminopyridine</b>		
Catalog Number	A0411	Supplier	TCI America 9211 N. Harborgate St. Portland OR 1-800-423-8616
Synonym	Not available.		
Chemical Formula	C <sub>5</sub> H <sub>6</sub> N <sub>2</sub>		
CAS Number	504-29-0	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
2-Aminopyridine	504-29-0	Min. 99.0 (GC, T)	Not available.	Rat LD <sub>50</sub> (oral) 200 mg/kg Rat LD <sub>50</sub> (intravenous) 29 mg/kg Rat LD <sub>50</sub> (intraperitoneal) 48 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><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	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	92°C (197.6°F).	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO, NO <sub>2</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

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. Environmentally hazardous material. Dust explosion hazard. Moisture sensitive material. Light 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 Storage**Handling and Storage  
Information

TOXIC. IRRITANT. ENVIRONMENTAL HAZARD. DUST EXPLOSION HAZARD. MOISTURE SENSITIVE. LIGHT 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.

**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. 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 reddish yellow.)	Solubility	Soluble in alcohol, ether, benzene, acetone, hot petrol ether, ethanol, ethyl ether; Very soluble in water (>100g/100mL 20°C)
Specific Gravity	1.065 (water=1)		
Molecular Weight	94.11	Partition Coefficient	LOG P <sub>ow</sub> : 0.49
Boiling Point	105°C (221 °F) @ 20 mmHg	Vapor Pressure	0.8 kPa/25°C
Melting Point	61°C (141.8°F)	Vapor Density	3.2 (Air = 1)
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
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. Moisture sensitive.

## Incompatibilities

Reactive with strong oxidizing agents, strong acids, sodium nitrile.

**Section XI. Toxicological Information**

## RTECS Number

US1575000

## Routes of Exposure

Eye Contact. Ingestion. Inhalation.

## Toxicity Data

Rat LD<sub>50</sub> (oral) 200 mg/kg  
Rat LD<sub>50</sub> (intravenous) 29 mg/kg  
Rat LD<sub>50</sub> (intraperitoneal) 48 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-Aminopyridine's production and use as an intermediate for antihistamines and other pharmaceuticals may result in its release to the environment through various waste streams. If released to air, an estimated vapor pressure of  $9.6 \times 10^{-2}$  mm Hg at 25 deg C indicates 2-aminopyridine will exist solely as a vapor in the ambient atmosphere. Vapor-phase 2-aminopyridine 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 19 hrs. If released to soil, 2-aminopyridine is expected to have very high mobility based upon an estimated Koc of 45. The pKa of 2-aminopyridine is 6.86, indicating that this compound will partially exist in the protonated form in the environment 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 an estimated Henry's Law constant of  $2.5 \times 10^{-9}$  atm-cu m/mole. 2-Aminopyridine will not volatilize from dry soil surfaces based upon its vapor pressure. 2-Aminopyridine degrades slowly in soil. In one study, 2-aminopyridine was found to completely degrade in greater than 96 days under both aerobic and anaerobic conditions. If released into water, 2-aminopyridine is not expected to adsorb to suspended solids and sediment in water based upon the estimated Koc; however at acidic pHs, the cation may adsorb. Volatilization from water surfaces is not expected to be an important fate process based upon this compound's estimated Henry's Law constant. Aminopyridines may be susceptible to photochemical degradation as this class of chemicals absorb above 280 nm. Biodegradation in water may slowly occur based upon biodegradation studies in soil. Measured BCFs of 3.0-7.7 and  $<5.1 \times 10^{-25}$  at a concentration of 0.1 and 0.01 mg/l, respectively, suggests bioconcentration in aquatic organisms is low. Occupational exposure to 2-aminopyridine may occur via dermal contact with this compound at workplaces where 2-aminopyridine 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 UN2671

Proper Shipping Name Aminopyridines

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

EINECS Number (EEC) 207-988-4

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.  
R53- May cause long-term adverse effects in the aquatic environment.

Japanese Regulatory Data ENCS no.: 5-724;  
9-106

**Section XVI. Other Information**

**Version 1.0**  
**Validated on 7/19/2011.**  
**Printed 7/19/2011.**

**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.