

Material Safety Data Sheet

4-Aminopyridine, 98%

ACC# 11601

Section 1 - Chemical Product and Company Identification

MSDS Name: 4-Aminopyridine, 98%**Catalog Numbers:** AC104570000, AC104570050, AC104570250, AC104571000**Synonyms:** 4-aminopyridine; amino-4 pyridine; gamma-aminopyridine; 4-pyridylamine**Company Identification:**

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01**For emergencies in the US, call CHEMTREC:** 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
504-24-5	4-aminopyridine	98.0	207-987-9

Hazard Symbols: T+**Risk Phrases:** 28 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white solid. **Danger!** Poison! Causes eye and skin irritation. Causes digestive and respiratory tract irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. May be fatal if inhaled, absorbed through the skin or swallowed.

Target Organs: Central nervous system.**Potential Health Effects****Eye:** Causes eye irritation. Causes redness and pain.**Skin:** Causes skin irritation. May be fatal if absorbed through the skin. Substance is rapidly absorbed through the skin. Causes symptoms similar to those of inhalation. Causes redness and pain.**Ingestion:** May be fatal if swallowed. May cause irritation of the digestive tract. Poison by ingestion. May cause effects similar to those for inhalation exposure. An oral dose of 590 mg/kg of 4-aminopyridine in a man produced shortness of breath, nausea, vomiting, hallucinations and distorted perception. Affects the CNS to produce tremor, excitability and convulsions.**Inhalation:** Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause severe headaches, nausea, increased blood pressure, weakness, convulsions, and a stuporous state.**Chronic:** None

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower

eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Containers may explode in the heat of a fire. Combustible solid.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Flash Point: 156 deg C (312.80 deg F)

Autoignition Temperature: 640 deg C (1,184.00 deg F)

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Poison room locked.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
4-aminopyridine	none listed	none listed	none listed

OSHA Vacated PELs: 4-aminopyridine: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face

protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: no odor

pH: Not available.

Vapor Pressure: 0.8 mm Hg @25C

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 273 deg C @ 760.00mm Hg

Freezing/Melting Point: 155 - 158 deg C

Decomposition Temperature: Not available.

Solubility: 8796 mg/L @25C

Specific Gravity/Density: Not available.

Molecular Formula: C₅H₆N₂

Molecular Weight: 94.12

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources, dust generation.

Incompatibilities with Other Materials: Oxidizing agents, strong acids, acid chlorides, acid anhydrides

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 504-24-5: US1750000

LD50/LC50:

CAS# 504-24-5:

Oral, mouse: LD50 = 19 mg/kg;

Oral, rat: LD50 = 21 mg/kg;

Carcinogenicity:

CAS# 504-24-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.

Other Studies: No data available.

Section 12 - Ecological Information

Ecotoxicity: Fish: Bluegill/Sunfish: LC50 = 2.8-7.5 mg/L; 96 Hr.; Static Conditions; 12-22 CBacteria: Phytobacterium phosphoreum: EC50 = 23.6-26.5 mg/L; 5,15,30 minutes; Microtox test; 15 Degrees C Bioaccumulation: none or low

Environmental: Leaching in soil may be possible to the occurrence of the slower bonding reaction. Based upon aqueous screening tests that used soil for inocula and soil grab sample data, both aerobic and anaerobic biodegradation of 4-aminopyridine is expected to be slow in soil.

Physical: Based upon a log Kow of 0.26, a bioconcentration factor (log BCF) of -0.03 for 4-aminopyridine has been calculated using a recommended regression-derived equation. This BCF value indicates 4-aminopyridine should not bioconcentrate among aquatic organisms.

Other: An estimated bioconcentration factor (log BCF) of -0.03 indicates 4-aminopyridine should not bioconcentrate among aquatic organisms.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: CAS# 504-24-5: waste number P008.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	AMINOPYRIDINES				No information available.
Hazard Class:	6.1				
UN Number:	UN2671				
Packing Group:	II				

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 504-24-5 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs

CAS# 504-24-5: 1000 lb final RQ; 454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 504-24-5: 500 lb TPQ (lower threshold); 10000 lb TPQ (upper thres hold)

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 504-24-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T+

Risk Phrases:

R 28 Very toxic if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 1 Keep locked up.

S 37/39 Wear suitable gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 28A After contact with skin, wash immediately with plenty of water.

WGK (Water Danger/Protection)

CAS# 504-24-5: No information available.

Canada - DSL/NDSL

CAS# 504-24-5 is listed on Canada's DSL List.

Canada - WHMIS

This product does not have a WHMIS classification.

Canadian Ingredient Disclosure List

Exposure Limits

Section 16 - Additional Information

MSDS Creation Date: 7/19/1999

Revision #2 Date: 3/18/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.