

CHAITANYA CHS, 2nd FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.

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MATERIAL SAFETY DATA SHEET (MSDS)

SPERMIDINE (FOR BIOCHEMISTRY)

1 - Chemical Product

Product Name: Spermidine

Synonym:N-(3-Aminopropyl)-1,4-butanediamine; 1,5,10-Triazadecane; 1,4-Diaminobutane, N-(3-aminopropyl)

Cas no:124-20-9

Product Coad: S0194200005

Molecular Formula: C7H19N3 Molecular Weight: 145.25

2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
124-20-9	Spermidine	99	204-689-0

3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Causes burns. Air sensitive. Corrosive.

Potential Health Effects

Eye: Causes eye burns. May cause chemical conjunctivitis and corneal damage.

Skin:Causes skin burns. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color.

Ingestion:May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. May cause systemic effects.

Inhalation: Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Aspiration may lead to pulmonary edema. May cause burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Chronic: Effects may be delayed.

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. Do NOT allow victim to rub eyes or keep eyes closed.

Extensive irrigation with water is required (at least 30 minutes).

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. Destroy contaminated shoes.

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

Inhalation:Get medical aid immediately. Remove from exposure and move to fresh air immediately. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician:

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

6 - ACCIDENTAL RELEASE MEASURES

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

Spills/Leaks:Clean up spills immediately, observing precautions in the Protective Equipment section. Cover with sand, dry lime or soda ash and place in a closed container for disposal. Provide ventilation. Place under an inert atmosphere.



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7 - HANDLING and STORAGE

Handling: Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use with adequate ventilation. Handle under an inert atmosphere. Store protected from air. Use only in a chemical fume hood. Discard contaminated shoes. Do not breathe vapor. Storage: Keep container closed when not in use. Keep refrigerated. (Store below 4C/39F.) Do not expose to air. Store under an inert atmosphere.

8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits CAS# 124-20-9: 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: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid above room te

Color: white

Odor: None reported. pH: Not available.

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: 128.0 - 130.0 deg C @ 14.00mm

Freezing/Melting Point: 22.00 - 25.00 deg C Autoignition Temperature: Not applicable.

Flash Point: > 112 deg C (> 233.60 deg F) Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available. Decomposition Temperature: Not available.

Solubility in water: soluble

Specific Gravity/Density: Not available.

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10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures. May decompose on exposure to air.

Conditions to Avoid:Incompatible materials, exposure to air, excess heat.

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

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

Hazardous Polymerization: Has not been reported.

11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 124-20-9: EJ7000000 LD50/LC50:

Not available.

Carcinogenicity:

Spermidine - Not listed by ACGIH, IARC, or NTP.

Other

See actual entry in RTECS for complete information.

12 - ECOLOGICAL INFORMATION

Other No information available.

13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.



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14 - TRANSPORT INFORMATION

IATA

Shipping Name: CORROSIVE LIQUID, N.O.S.*

Hazard Class: 8 UN Number: 1760 Packing Group: II

IMO

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15 - REGULATORY INFORMATION

European/International Regulations European Labeling in Accordance with EC Directives Hazard Symbols: C Risk Phrases: R 34 Causes burns. Safety Phrases: S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 28A After contact with skin, wash immediately with plenty of water. WGK (Water Danger/Protection) CAS# 124-20-9: 1 Canada CAS# 124-20-9 is listed on Canada's DSL List. CAS# 124-20-9 is not listed on Canada's Ingredient Disclosure List. **US FEDERAL TSCA**

CAS# 124-20-9 is listed on the TSCA inventory.

16. Other Information

Product Use: Laboratory Reagent.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- · SUVCHEM shall not be responsible for any damage resulting from handling or from contact with the above product.
- SUVCHEM provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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