

MATERIAL SAFETY DATA SHEET

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Version 1.5

Section 1 - Product and Company Information

Product Name HEXYLAMINE, 99%
Product Number 219703
Brand ALDRICH

Company Sigma-Aldrich
Address 3050 Spruce Street
 SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
HEXYLAMINE	111-26-2	No

Formula C6H15N
Synonyms 1-Aminohexane * ENT 16554 * 1-Hexanamine (9CI) *
 n-Hexylamine * Mono-n-hexylamine
RTECS Number: MQ4540000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Flammable. Toxic (USA) Harmful (EU).
Harmful if swallowed. Toxic in contact with skin. Causes severe
burns.
Readily absorbed through skin.

HMIS RATING

HEALTH: 2*
FLAMMABILITY: 3
REACTIVITY: 1

NFPA RATING

HEALTH: 2
FLAMMABILITY: 3
REACTIVITY: 1

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is
conscious. Call a physician immediately. Do not induce vomiting.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give
artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLAMMABLE HAZARDS

Flammable Hazards: Yes

EXPLOSION HAZARDS

Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions. Forms explosive mixtures in air.

FLASH POINT

81 °F 27 °C Method: closed cup

EXPLOSION LIMITS

Lower: 2.1 % Upper: 9.3 %

AUTOIGNITION TEMP

270 °C

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.
Flammable liquid.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame. Store in a cool dry place. Store under nitrogen.
Incompatible Materials: Absorbs carbon dioxide from air.

SPECIAL REQUIREMENTS

Air sensitive.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.
Other: Faceshield (8-inch minimum).

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Color: Colorless Form: Clear liquid	
Property	Value	At Temperature or Pressure
Molecular Weight	101.19 AMU	
pH	11.6	20 °C Concentration: 10 g/l
BP/BP Range	133 °C	
MP/MP Range	- 19.0 °C	
Freezing Point	N/A	
Vapor Pressure	10.6 mbar	20 °C
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	0.765 g/cm ³	20 °C
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	< 0.2 %	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	1.07 Pas	20 °C
Surface Tension	N/A	
Partition Coefficient	Log Kow: 1.9	20 °C
Decomposition Temp.	N/A	
Flash Point	81 °F 27 °C	Method: closed cup

Explosion Limits	Lower: 2.1 % Upper: 9.3 %
Flammability	N/A
Autoignition Temp	270 °C
Refractive Index	1.418
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	Solubility in Water:Soluble.

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Acids, Acid chlorides, Acid anhydrides, Strong oxidizing agents Carbon dioxide.

HAZARDOUS DECOMPOSITION PRODUCTS

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

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes burns.

Skin Absorption: Harmful if absorbed through skin.

Eye Contact: Causes burns.

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Oral

Rat

240 mg/kg

LD50

Skin

Rabbit

420 mg/kg

LD50

Oral

Rat

670 mg/kg

LD50

Skin
Rabbit
420 UL/KG
LD50

IRRITATION DATA

Skin
Rabbit
Remarks: Severe irritation effect

Skin
Rabbit
10 mg
24H
Remarks: Open irritation test

Skin
Rabbit
500 mg
Remarks: Open irritation test

Eyes
Rabbit
5 mg
Remarks: Moderate irritation effect

Eyes
Rabbit
0.75 mg
24H
Remarks: Severe irritation effect

Section 12 - Ecological Information

No data available.

ACUTE ECOTOXICITY TESTS

Test Type: LC50 Fish
Species: Leuciscus idus
Time: 96 h
Value: > 10.0 - < 22.0 mg/l

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Amines, liquid, corrosive, flammable, n.o.s. [or] Polyamines, liquid, corrosive, flammable, n.o.s.
UN#: 2734
Class: 8
Packing Group: Packing Group I
Hazard Label: Corrosive
Hazard Label: Flammable liquid

PIH: Not PIH

IATA

Proper Shipping Name: Amines, liquid, corrosive,
flammable, n.o.s.
IATA UN Number: 2734
Hazard Class: 8
Packing Group: I

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: C
Indication of Danger: Corrosive.
R: 10-21/22-35
Risk Statements: Flammable. Harmful in contact with skin and if
swallowed. Causes severe burns.
S: 26-36/37/39-45
Safety Statements: In case of contact with eyes, rinse
immediately with plenty of water and seek medical advice. Wear
suitable protective clothing, gloves, and eye/face protection.
In case of accident or if you feel unwell, seek medical advice
immediately (show the label where possible).

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable. Toxic (USA) Harmful (EU).
Risk Statements: Harmful if swallowed. Toxic in contact with
skin. Causes severe burns.
Safety Statements: In case of contact with eyes, rinse
immediately with plenty of water and seek medical advice. Wear
suitable protective clothing, gloves, and eye/face protection.
In case of accident or if you feel unwell, seek medical advice
immediately (show the label where possible).
US Statements: Readily absorbed through skin.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in
accordance with the hazard criteria of the CPR, and the MSDS
contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not
purport to be all inclusive and shall be used only as a guide. The
information in this document is based on the present state of our
knowledge and is applicable to the product with regard to
appropriate safety precautions. It does not represent any
guarantee of the properties of the product. Sigma-Aldrich Inc.,
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