

SAFETY DATA SHEET



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HEXYL ALCOHOL

SDS No. M0119

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hexyl Alcohol

Synonyms: 1-Hexanol; Hexanol; n-Hexanol; Amyl Carbinol; Caproyl Alcohol

Recommended Use: This product is recommended for laboratory and manufacturing use only. It is not recommended for drug, food or household use.

2. HAZARDS IDENTIFICATION



Classification:

Flammable Liquids: GHS Category 3

Acute Toxicity, Oral: GHS Category 4

Acute Toxicity, Dermal: GHS Category 4

Eye Irritation: GHS Category 2A

Acute Aquatic Toxicity: GHS Category 3

Label Elements

Signal Word: DANGER!

Hazard Statements:

H226 – Flammable liquid and vapor.

H302 – Harmful if swallowed.

H312 – Harmful in contact with skin.

H319 – Causes serious eye irritation.

H402 – Hazardous to aquatic life.

Precautionary Statements:

P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P243 – Take precautionary measures against static discharge.

P273 – Avoid release to the environment.

P280 – Wear protective gloves/clothing/eye protection/face protection.

P303+P361+P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Clear focus. Consistent results. Complete confidence.

Emergency Overview

Causes severe irritation to the eyes. May cause irritation to skin, digestive tract, and respiratory tract. May cause central nervous system effects. May be harmful if swallowed. Combustible liquid and vapor. Target Organs: Central nervous system.

HMIS Rating:

Health – 2* Flammability – 2 Physical Hazard – 0 PPE – User supplied

NOTE: HMIS ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. These ratings are based on the inherent properties of this chemical under expected conditions of normal use and are not intended to be used in emergency situations. PPE is determined by the user based on their needs and conditions.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS No</u>	<u>Percent</u>	<u>Hazardous</u>
Hexyl Alcohol	111-27-3	>99%	Yes

4. FIRST-AID MEASURES

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

Ingestion: Get medical help immediately. Do not induce vomiting. If victim is conscious and alert, give 2-4 cups of water or milk. If vomiting occurs naturally, have victim lean forward. Never give anything by mouth to an unconscious person.

Skin Contact: Remove any contaminated clothing. Wash skin with water for at least 15 minutes. Get medical attention.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention.

Notes to Physician: Urine acetone test may be helpful in diagnosis. Hem dialysis should be considered in severe intoxication. Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammability: Combustible liquid and vapor (GHS Category 4)

Auto-ignition Temperature: 293° C (559° F)

Flash Point: 60° C (140° F)

Flammable Limits: Lower Limit – 1.2 vol %, Upper Limit – 7.7 vol %

Products of Combustion: May decompose into irritating and highly toxic gases under fire conditions (formaldehyde, carbon monoxide, carbon, dioxide).

Specific Fire Hazards: As in any fire, always wear self-contained breathing apparatus in pressure-demand (MSA/NIOSH approved or equivalent), and full protective gear. Vapors may form explosive mixtures with air. Use water spray to keep fire exposed containers cool. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Specific Explosion Hazards: None.

Fire Fighting Media: Use water spray, fog, or alcohol-resistant foam. Cool containers with flooding quantities of water and well after fire is out.

National Fire Protective Association: Health - 2, Flammability - 2, Reactivity - 0

NOTE: NFPA ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. They are for use by emergency personnel to address the hazards that are presented by short term, acute exposure to this product under fire, spill, or similar emergencies. Ratings involve data and interpretations that may vary from company to company.

6. ACCIDENTAL RELEASE MEASURES

Use water spray to reduce vapors. Water spray may reduce vapors but still not prevent ignition in closed spaces. Absorb spilled liquid with sorbent pads, socks, or other inert material such as vermiculite, sand, or earth. Do not use sawdust or any combustible material. Use spark-proof tools. Provide ventilation to the affected area and remove all ignition sources. Approach the spill from upwind and pick up absorbed material and place it in a suitable container. Always use proper personal protective equipment as described in section 8.

7. HANDLING AND STORAGE

Precautions: Always use proper personal protective equipment as described in section 8. Wash thoroughly after handling. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Remove contaminated clothing and wash before reuse. Empty containers contain product residue (liquid and vapor) and can be dangerous. Keep container tightly closed and away from heat, spark, and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks, or open flames. Use with adequate ventilation. Avoid breathing vapor or mist.

Storage: Keep in a flammables area away from direct sunlight and all sources of ignition and oxidizing materials. Keep in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep from contact with oxidizing materials. After opening, purge container with nitrogen before reclosing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or using the material should be equipped with eyewash station and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protection: Wear protective chemical goggles or other appropriate eye protection. Use butyl rubber gloves and protective clothing to prevent skin exposure. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever possible. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Exposure Limits: None established

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Clear, colorless liquid.

Odor: None reported

Molecular Formula: CH₃(CH₂)₅OH

Molecular Weight: 102.18

Auto-ignition Temperature: 293° C (559° F)

Flash Point: 60° C (140° F)

Flammable Limits: Lower Limit – 1.2 vol %, Upper Limit – 7.7 vol %

pH: Not available.

Boiling Point: 157° C

Freezing/Melting Point: -52° C

Decomposition Temperature: Not available

Specific Gravity: 0.82 g/cm³

Vapor Density (Air=1): 3.52

Vapor Pressure: 1 mm Hg @ 24.4° C.

Evaporation Rate (Butyl acetate = 1): Not available

Viscosity: 5.3 mPas 20° C

Solubility: Insoluble

10. STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions.

Conditions to Avoid: Mechanical shock, ignition sources, excess heat, incompatible substances.

Incompatibility With Various Substances: Oxidizing agents, acids.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: has not been reported.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, skin absorption, skin contact

Acute Exposure Hazards:

INHALATION HAZARD: Inhalation of high concentrations may cause central nervous effects characterized by nausea, headache, dizziness, unconsciousness, and coma. May cause irritation of respiratory tract.

INGESTION HAZARD: May cause gastrointestinal irritation with nausea, vomiting, and diarrhea. May be harmful if swallowed.

SKIN CONTACT HAZARD: May cause skin irritation.

EYE CONTACT HAZARD: May cause severe eye irritation. May cause corneal injury.

Chronic Exposure Hazards: Repeated or prolonged exposure may cause narcotic effects.

Animal Toxicity:

Oral, mouse: LD50 = 1950 mg/kg;

Oral, rat: LD50 = 710 mg/kg;

Oral, rat: LD50 = 720 mg/kg;

Skin, rabbit: LD50 = 3100 uL/kg;

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: flathead minnow: LC50 = 97.7 mg/l, 96 hr.

Invertebrate: water flea: EC50 = >100 mg/l, 24 hr.

Environmental Fate: Based on low boiling and melting points, this material would be expected to volatilize quickly.

Biodegradability >70% - readily biodegradable. Bioconcentration (BCF) = 0.5

13. DISPOSAL CONSIDERATIONS

Material that cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. Waste generators must decide if discarded material is a hazardous waste. State and local disposal regulations may differ from federal disposal definitions found in 40 CFR 261.3. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

US DOT

Proper Shipping Name: Hexanols

Hazard Class: 3

UN Number: UN2282
Packing Group: III

IMDG

Proper Shipping Name: Hexanols
Hazard Class: 3
UN Number: UN2282
Packing Group: III

IATA

Proper Shipping Name: Hexanols
Hazard Class: 3
UN Number: UN2282
Packing Group: III

15. REGULATORY INFORMATION

US Federal Regulations:

CERCLA Hazardous Substances: Dos does not have an RQ
SARA Section 302: Does not have a TPQ
SARA Codes: CAS# 111-27-3 – acute, flammable
Section 313: Hexanol (CAS# 111-27-3) is not subject to SARA Title III Section 313 and 40 CFR 373 reporting requirements.
OSHA: Not considered highly hazardous by OSHA.

US State Regulations:

CAS# 111-27-3 is on the following state right-to-know lists: New Jersey and Pennsylvania
California Prop 65: This product contains no chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Originally Prepared: 5/21/2007

Last Revised: 11/19/2014 – Updated hazard categories, hazard statements, and precautionary statements in Section 2 and ecological toxicity information in Section 12.

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

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