# SAFETY DATA SHEET

**Creation Date** 31-August-2010 **Revision Date** 25-March-2024 **Revision Number** 2

## 1. Identification

**Product Name** **Hexyl alcohol, anhydrous**

**Cat No. :** **C43386**

**CAS-No** 111-27-3
**Synonyms** 1-Hexanol

**Recommended Use** Laboratory chemicals.
**Uses advised against** Food, drug, pesticide or biocidal product use.

**Details of the supplier of the safety data sheet**

**Company**
**Importer/Distributor**
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

**Emergency Telephone Number**
For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
**CHEMTREC** Tel. No. **US:**001-800-424-9300 / **Europe:**001-703-527-3887

## 2. Hazard(s) identification

**Classification**

**WHMIS 2015 Classification** Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

| | |
|---|---|
| **Flammable liquids** | Category 3 |
| **Acute oral toxicity** | Category 4 |
| **Acute dermal toxicity** | Category 4 |
| **Serious Eye Damage/Eye Irritation** | Category 2 |

**Label Elements**

**Signal Word**
Warning

**Hazard Statements**
Flammable liquid and vapor
Harmful if swallowed or in contact with skin
Causes serious eye irritation

**Precautionary Statements**
**Prevention**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Use non-sparking tools
Take action to prevent static discharges
**Response**
IF ON SKIN: Wash with plenty of soap and water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Call a POISON CENTER/ doctor if you feel unwell
Rinse mouth
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
Fight fire with normal precautions from a reasonable distance
Evacuate area
Take off contaminated clothing and wash it before reuse
**Storage**
Store in a well-ventilated place. Keep cool
Store locked up
**Disposal**
Dispose of contents/container to an approved waste disposal plant

## 3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| 1-Hexanol | 111-27-3 | >95 |

## 4. First-aid measures

**General Advice** If symptoms persist, call a physician.

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.

**Inhalation** Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention.

**Ingestion** Do NOT induce vomiting. Call a physician or poison control center immediately.

**Most important symptoms/effects** Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness,

| | |
|---|---|
| | nausea and vomiting |
| **Notes to Physician** | Treat symptomatically |

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

**Unsuitable Extinguishing Media** No information available

**Flash Point** 59 °C / 138.2 °F

**Method -** DIN 51758

**Autoignition Temperature** 292 °C / 557.6 °F

**Explosion Limits**
**Upper** 7.7 vol %
**Lower** 1.2 vol %

**Oxidizing Properties** Not oxidising

**Sensitivity to Mechanical Impact** No information available
**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**
Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**
Carbon monoxide (CO). Carbon dioxide ($CO_2$).
**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 2 | 2 | 0 | N/A |

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.

**Environmental Precautions** Avoid release to the environment. See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up** Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment.

## 7. Handling and storage

**Handling** Wear personal protective equipment/face protection. Ensure adequate ventilation. Use spark-proof tools and explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

**Storage.** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Incompatible Materials. Strong oxidizing agents. Strong acids.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies.

**Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment**

**Eye Protection** Goggles
**Hand Protection** Protective gloves

| Glove material | Breakthrough time | Glove thickness | Glove comments |
|---|---|---|---|
| Nitrile rubber | > 480 minutes | 0.35 mm | As tested under EN374-3 |
| Butyl rubber | > 480 minutes | 0.5 mm | Determination of Resistance to Permeation by Chemicals |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
**Recommended Filter type:** Organic gases and vapours filter Type A Brown conforming to EN14387

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**
Prevent product from entering drains.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

| | |
|---|---|
| **Physical State** | Liquid |
| **Appearance** | Colorless |
| **Odor** | sweet |
| **Odor Threshold** | 10 ppm |
| **pH** | Not applicable |
| **Melting Point/Range** | -52 °C / -61.6 °F |
| **Boiling Point/Range** | 156 - 157 °C / 312.8 - 314.6 °F |
| **Flash Point** | 59 °C / 138.2 °F |
| **Method -** | DIN 51758 |
| **Evaporation Rate** | No information available |
| **Flammability (solid,gas)** | Not applicable |
| **Flammability or explosive limits** | |
| **Upper** | 7.7 vol % |

| | |
|---|---|
| **Lower** | 1.2 vol % |
| **Vapor Pressure** | 1.3 mbar @ 20 °C |
| **Vapor Density** | 3.52 |
| **Specific Gravity** | 0.814 |
| **Solubility** | No information available |
| **Partition coefficient; n-octanol/water** | No data available |
| **Autoignition Temperature** | 292 °C / 557.6 °F |
| **Decomposition Temperature** | No information available |
| **Viscosity** | 5.3 mPa.s at 20 °C |
| **Molecular Formula** | C6 H14 O |
| **Molecular Weight** | 102.18 |

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions.

**Conditions to Avoid** Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. Protect from direct sunlight.

**Incompatible Materials** Strong oxidizing agents, Strong acids

**Hazardous Decomposition Products** Carbon monoxide (CO), Carbon dioxide ($CO_2$)

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Acute Toxicity**

**Product Information**

**Component Information**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| 1-Hexanol | LD50 = 3210 mg/kg ( Rat ) | LD50 1500 - 2000 mg/kg ( Rabbit ) | LC50 > 21 mg/L ( Rat ) 1 h |

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** Irritating to eyes

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| 1-Hexanol | 111-27-3 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects,both acute and delayed** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

**Ecotoxicity**

This product contains the following substance(s) which are hazardous for the environment.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|---|---|---|---|---|
| 1-Hexanol | Not listed | LC50 > 100 mg/L 96h | EC50 = 27.5 mg/L 30 min<br>EC50 = 300.4 mg/L 48 h | Not listed |

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Will likely be mobile in the environment due to its water solubility.

| Component | log Pow |
|---|---|
| 1-Hexanol | 1.8 |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

**UN-No** UN2282
**Proper Shipping Name** HEXANOLS
**Hazard Class** 3
**Packing Group** III

**TDG**

**UN-No** UN2282
**Proper Shipping Name** HEXANOLS
**Hazard Class** 3
**Packing Group** III

**IATA**

**UN-No** UN2282
**Proper Shipping Name** HEXANOLS
**Hazard Class** 3
**Packing Group** III

**IMDG/IMO**

**UN-No** UN2282
**Proper Shipping Name** HEXANOLS
**Hazard Class** 3
**Packing Group** III

## 15. Regulatory information

**International Inventories**

| Component | CAS-No | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS | ELINCS | NLP |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1-Hexanol | 111-27-3 | X | - | X | ACTIVE | 203-852-3 | - | - |

| Component | CAS-No | IECSC | KECL | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|---|---|---|---|---|---|---|---|---|---|
| 1-Hexanol | 111-27-3 | X | KE-19815 | X | X | X | X | X | X |

**Legend:**
X - Listed '-' - Not Listed
**KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**IECSC** - Chinese Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**ENCS** - Japanese Existing and New Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

| Component | Canada - National Pollutant Release Inventory (NPRI) | Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances | Canada's Chemicals Management Plan (CEPA) |
|---|---|---|---|
| 1-Hexanol | Part 4 Substance | | |

**Other International Regulations**

**Authorisation/Restrictions according to EU REACH** Not applicable

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component | CAS-No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|---|---|---|---|---|---|
| 1-Hexanol | 111-27-3 | Listed | Not applicable | Not applicable | Not applicable |

| Component | CAS-No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---|---|---|---|---|---|
| 1-Hexanol | 111-27-3 | Not applicable | Not applicable | Not applicable | Not applicable |

## 16. Other information

**Prepared By** Product Safety Department
Email: chem.techinfo@thermofisher.com
www.thermofisher.com

**Creation Date** 31-August-2010
**Revision Date** 25-March-2024
**Print Date** 25-March-2024
**Revision Summary** New emergency telephone response service provider.

**Disclaimer**
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## End of SDS