



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 11/25/2003
Date Updated: 09/19/2002
Version 1.0

Section 1 - Product and Company Information

Product Name: LIGROIN
Product Number: 333417
Brand: Aldrich Chemical
Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052
Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

Substance Name: PETROLEUM ETHER
CAS #: 101316-46-5
SARA 313: Yes

Formula: ligroin
Synonyms:

Section 3 - Hazards Identification

Emergency Overview
Flammable (USA) Highly Flammable (EU). Harmful. Dangerous for the environment.
Highly flammable. Irritating to skin. Harmful. danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.
Target organ(s): Nerves, Kidneys.

HIMIS Rating
Health: 2*
Flammability: 3
Reactivity: 0
NFPA Rating
Health: 2
Flammability: 3
Reactivity: 0

*additional chronic hazards present.

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.
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 contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Flammable Hazards: Yes
Explosion Hazards
Vapor may travel considerable distance to source of ignition and flash back.
Container explosion may occur under fire conditions.
Flash Point: <= 4 °F <= 20 °C
Autoignition Temp: N/A
Flammability: Yes
Extinguishing Media
Suitable
Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.
Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)
Flammable liquid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill
Evacuate area. Shut off all sources of ignition. Use nonsparking tools.
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, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. 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.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.
Personal Protective Equipment
Respiratory
Government approved respirator.
Hand
Compatible chemical-resistant gloves.
Eye
Chemical safety goggles.

Aldrich Chemical - 333417
Sigma-Aldrich Corporation
www.sigma-aldrich.com

General Hygiene Measures
Remove and wash contaminated clothing promptly. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Physical State	Color
Clear liquid		Colorless
Molecular Weight:	N/A	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	0.66 - 0.705 g/cm ³	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point °F	<= -4 °F	Method: closed cup
Flash Point °C	<= -20 °C	Method: closed cup
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	1.372 - 1.379	
Solubility	N/A	
N/A = not available		

Section 10 - Stability and Reactivity

Stability
Stable
Stable
Materials to Avoid
Strong oxidizing agents, Incompatible with: chlorine, fluorine, and magnesium perchlorate.

Hazardous Decomposition Products
Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
Causes skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
May cause eye irritation.
Inhalation
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion
May be harmful if swallowed.
Target Organ(s) or System(s)
Kidneys, Peripheral nervous system, Testes.
RTECS Number: N/A

Section 12 - Ecological Information

No data available.

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 lighting as this material is highly flammable.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: Petroleum distillates, n.o.s. [or] Petroleum products, n.o.s.
UN#: 1268
Class: 3
Packing Group: Packing Group II
Hazard Label: Flammable liquid
PIH: Not PIH

IATA
Proper Shipping Name: Petroleum distillates, n.o.s.
IATA UN Number: 1268
Hazard Class: 3
Packing Group: II

Section 15 - Regulatory Information

EU Additional Classification
Symbol of Danger: F Xn N

Indication of Danger

Highly Flammable, Harmful, Dangerous for the environment.

Risk Statements

R: 11 38 48/20 51/53 62 67

Highly flammable. Irritating to skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Harmful:

may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Safety Statements

S: 16 33 36/37 60 62

Keep away from sources of ignition - no smoking. Take precautionary measures against static discharges. Wear suitable protective clothing and gloves. This material and its container must be disposed of as hazardous waste. If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

US Classification and Label Text

Indication of Danger

Flammable (USA) Highly Flammable (EU). Harmful. Dangerous for the environment.

Risk Statements

Highly flammable. Irritating to skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Safety Statements

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Keep container in a well-ventilated place. Keep away from sources of ignition - no smoking. Do not empty into drains. Take precautionary measures against static discharges. Wear suitable protective clothing, gloves, and eye/face protection. Avoid release to the environment. Refer to special instructions/safety data sheets. If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

US Statements

Target organ(s): Nerves. Kidneys.

United States Regulatory Information

SARA Listed: Yes

Notes: This product is or contains a component that is subject to SARA313 reporting requirements.

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: No

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. Sigma-Aldrich Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2003 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.



SIGMA-ALDRICH

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Fax: 800 325 5052
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11/25/03

MSDS Address Confirmation

Our records indicate your MSDS address as:

Acct.# 0049487708

SCHOOLCRAFT COLLEGE
18600 HAGGERTY RD
LIVONIA, MI 48152-3932
US

Address Correction:

Telephone: _____

Comments(if necessary):

Please read and sign below if your organization does not wish to receive any further MSDS mailings from Sigma Aldrich.

*I hereby certify that my organization meets all 29 CFR 1910.1200 OSHA HAZCOMM requirements by alternative means, electronic or otherwise, and do not require Sigma-Aldrich to send me a paper copy of MSDS' for any and all products ordered from Sigma-Aldrich Corporation.

Signature of Corporate Product Safety Director _____

Date _____

Please fax completed confirmation to our CMMG department at 877-380-2660 or 314-286-8083 or e-mail address changes to cmmg@sial.com.