

MATERIAL SAFETY DATA SHEET

Section 1 - Chemical Product and Company Identification

MSDS Name: Petroleum ether
Catalog Numbers: S76880, S768801, S768802, S93319, S93320
Synonyms: Ligoine; Ligoin.
Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 8032-32-4
Chemical Name: Ligoine
%: 100
EINECS#: 232-453-7

Hazard Symbols: F



Risk Phrases: 11

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Prolonged or repeated contact causes defatting of the skin with irritation, dryness, and cracking. This substance has caused adverse reproductive and fetal effects in animals. May cause central nervous system depression. Aspiration hazard if swallowed. Can enter lungs and cause damage. Harmful if swallowed. May cause lung damage. Extremely flammable liquid and vapor. Vapor may cause flash fire. Causes eye, skin, and respiratory tract irritation. Target Organs: Central nervous system, lungs.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Prolonged and/or repeated contact may cause irritation and/or dermatitis. Exposure may cause irritation characterized by redness, dryness, and inflammation.

Ingestion: Harmful if swallowed. Aspiration hazard. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. High vapor concentrations may cause drowsiness. May cause hemorrhage of vital organs and coma.

Chronic: Prolonged or repeated skin contact may cause dermatitis.

Section 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.
- Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
- Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. 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:

Section 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. Extremely flammable liquid and vapor. Vapor may cause flash fire. 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.
- Extinguishing Media:** Use foam, dry chemical, or carbon dioxide. Water may be ineffective. This material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained.
- Autoignition Temperature:** 288 deg C (550.40 deg F)
- Flash Point:** -18 deg C (-0.40 deg F)
- Explosion 1.1**
- Limits: Lower: Explosion 5.9**
- Limits: Upper:**
- NFPA Rating:** health: 1; flammability: 4; instability: 0;

Section 6 - Accidental Release Measures

- General Information:** Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

- Handling:** Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Do not ingest or inhale. Prevent build up of vapors to explosive concentration. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
- Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

Section 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 general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits +-----+-----+
+-----+-----+

Chemical Name Final PELs	ACGIH	NIOSH	OSHA -
Ligroine listed	300 ppm	350 mg/m3 TWA	none

OSHA Vacated PELs: Ligroine: 300 ppm TWA; 1350 mg/m3 TWA

Personal Protective Equipment

- Eyes:** Wear chemical splash goggles.
- 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.

Section 9 - Physical and Chemical Properties

- Physical State:** Liquid
- Color:** Clear
- Odor:** mild odor - gasoline-like
- pH:** Not applicable
- Vapor Pressure:** 40 mm Hg @ 20 deg C
- Vapor Density:** 2.5 (air=1)
- Evaporation Rate:** 10 (butyl acetate =1)
- Viscosity:** Not available
- Boiling Point:** 35 deg C (95.00°F)
- Freezing/Melting Point:** -73 deg C (-99.40°F)
- Decomposition Temperature:** Not available
- Solubility in water:** Insoluble
- Specific Gravity/Density:** 0.60 - 0.75
- Molecular Formula:** Not applicable.
- Molecular Weight:** 87

Section 10 - Stability and Reactivity

- Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.
- Conditions to Avoid:** Ignition sources, excess heat.
- Incompatibilities with Other Materials:** Not available
- Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide.
- Hazardous Polymerization:** Has not been reported.

Section 11 - Toxicological Information

- RTECS#:** CAS# 8032-32-4: OI6180000
- LD50/LC50:** RTECS:
CAS# 8032-32-4: Inhalation, rat: LC50 = 3400 ppm/4H;
- Carcinogenicity:** Ligroine - ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans
- Epidemiology:** ACGIH has labeled this substance as a confirmed animal carcinogen.
- Teratogenicity:** Teratogenic effects have occurred in experimental animals.
- Reproductive:** No information found

Neurotoxicity: No information found
Mutagenicity: No information found
Other: Not available

Section 12 - Ecological Information

Ecotoxicity: Not available

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. RCRA P-Series: None listed. RCRA U-Series: None listed.

Section 14 - Transport Information

US DOT
Shipping Name: PETROLEUM DISTILLATES, N.O.S.
Hazard Class: 3
UN Number: UN1268
Packing Group: II
Canada TDG
Shipping Name: PETROLEUM DISTILLATES, NOS
Hazard Class: 3
UN Number: UN1268
Packing Group: II

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 8032-32-4 is listed on the TSCA Inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 8032-32-4: acute, chronic, flammable.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: STATE

Ligroine can be found on the following state right to know lists: New Jersey,

Pennsylvania, Minnesota.

California Prop 65

California No Significant None of the chemicals in this product are listed.

Risk Level:

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F

Risk Phrases:

R 11 Highly flammable.

Safety Phrases:

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 29 Do not empty into drains.

S 33 Take precautionary measures against static discharges.

WGK (Water Danger/Protection)

CAS# 8032-32-4: 1

Canada

CAS# 8032-32-4 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 8032-32-4 is listed on Canada's Ingredient Disclosure List

Section 16 - Other Information

MSDS Creation Date: 9/02/1997

Revision #6 Date 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.