



## SAFETY DATA SHEET

Creation Date 11-Feb-2010

Revision Date 08-Apr-2014

Revision Number 1

### 1. Identification

<b>Product Name</b>	<b>Petroleum Ether</b>
<b>Cat No. :</b>	<b>E120-4; E120-4LC; E120SK-4; E120SS-50; E139-1; E139-4; E139-20; E139-200; E139-500; E139FB-19; E139FB-50; E139FB-115; E139FB-200; E139RB-50; E139RB-115; E139RB-200; E139RS-19; E139RS-28; E139RS-50; E139RS-115; E139RS-200; E139S-4; E139SK-4; E139SS-28; E139SS-50; E139SS-200; P480-4; P480-4LC; P480RS-19; P480RS-28; P480RS-50; P480RS-115; P480RS-200; P480SS-28; P480SS-50; P480SS-115; P480SS-200; P481RS-200; P481SS-200</b>
<b>Synonyms</b>	Ligroine; Benzine; Naphtha Petroleum; Naphtha Solvent (Optima/Pesticide/Certified ACS)
<b>Recommended Use</b>	Laboratory chemicals
<b>Uses advised against</b>	No Information available

#### Details of the supplier of the safety data sheet

<b>Company</b>	<b>Emergency Telephone Number</b>
Fisher Scientific	CHEMTREC®, Inside the USA: 800-424-9300
One Reagent Lane	
Fair Lawn, NJ 07410	CHEMTREC®, Outside the USA: 001-703-527-3887
Tel: (201) 796-7100	

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS).	
Aspiration Toxicity	Category 1

#### Label Elements

**Signal Word**  
Danger

**Hazard Statements**  
Highly flammable liquid and vapor

May be fatal if swallowed and enters airways  
 May cause drowsiness or dizziness  
 May cause genetic defects  
 May cause cancer



**Precautionary Statements**

**Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 Keep container tightly closed  
 Ground/bond container and receiving equipment  
 Use explosion-proof electrical/ventilating/lighting/equipment  
 Use only non-sparking tools  
 Take precautionary measures against static discharge  
 Keep cool

**Response**

IF exposed or concerned: Get medical attention/advice

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Do NOT induce vomiting

**Fire**

In case of fire: Use CO2, dry chemical, or foam for extinction

**Storage**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

**3. Composition / Information on ingredients**

**Haz/Non-haz**

Component	CAS-No	Weight %
Ligroine	8032-32-4	100

**4. First-aid measures**

#### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately.
<b>Most important symptoms/effects</b>	Breathing difficulties. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
<b>Notes to Physician</b>	Treat symptomatically.

#### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.
<b>Unsuitable Extinguishing Media</b>	Water may be ineffective
<b>Flash Point</b>	< -17.8°C / < 0°F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	287.8°C / 550°F
<b>Explosion Limits</b>	
<b>Upper</b>	5.9 vol %
<b>Lower</b>	1.1 vol %
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	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.

**Hazardous Combustion Products** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrocarbons.

#### 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. Thermal decomposition can lead to release of irritating gases and vapors.

#### NFPA

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
1	3	0	N/A

#### 6. Accidental release measures

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions</b>	Should not be released into 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. Take precautionary measures against static discharges. Keep in suitable, closed containers for disposal.

## 7. Handling and storage

**Handling** Use only under a chemical fume hood. Use explosion-proof equipment. Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep under nitrogen. Flammables area.

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ligroine		(Vacated) TWA: 300 ppm (Vacated) TWA: 1350 mg/m <sup>3</sup> (Vacated) STEL: 400 ppm (Vacated) STEL: 1800 mg/m <sup>3</sup>	TWA: 350 mg/m <sup>3</sup> Ceiling: 1800 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Ligroine	TWA: 300 ppm TWA: 1370 mg/m <sup>3</sup>	TWA: 300 ppm TWA: 1350 mg/m <sup>3</sup> STEL: 400 ppm STEL: 1800 mg/m <sup>3</sup>	

### Legend

**OSHA** - Occupational Safety and Health Administration

**NIOSH IDLH**: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures** Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure

**Respiratory Protection** 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

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

## 9. Physical and chemical properties

<b>Physical State</b>	Liquid
<b>Appearance</b>	Colorless
<b>Odor</b>	Petroleum distillates
<b>Odor Threshold</b>	No information available.
<b>pH</b>	No information available.
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	38°C / 100.4°F
<b>Flash Point</b>	< -17.8°C / < 0°F

## 9. Physical and chemical properties

Evaporation Rate	Slower than ether
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	5.9 vol %
Lower	1.1 vol %
Vapor Pressure	No information available.
Vapor Density	No information available.
Relative Density	No information available.
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	287.8°C / 550°F
Decomposition temperature	No information available.
Viscosity	No information available.

## 10. Stability and reactivity

Reactive Hazard	None known, based on information available.
Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks.
Incompatible Materials	None known
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrocarbons
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions	None under normal processing

## 11. Toxicological information

### Acute Toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ligroine	Not listed	Not listed	3400 ppm ( Rat ) 4 h

**Toxicologically Synergistic Products** No information available.

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

**Irritation** No information available.

**Sensitization** No information available.

**Carcinogenicity** The European Union classifies this product as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Ligroine	8032-32-4	Not listed	Not listed	Not listed	Not listed	A3

**ACGIH:** (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

**Mutagenic Effects** No information available.

<b>Reproductive Effects</b>	Experiments have shown reproductive toxicity effects on laboratory animals.
<b>Developmental Effects</b>	Developmental effects have occurred in experimental animals.
<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	Central nervous system (CNS).
<b>STOT - repeated exposure</b>	None known.
<b>Aspiration hazard</b>	No information available.
<b>Symptoms / effects, both acute and delayed</b>	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

. Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ligroine	4700 mg/L EC50 = 72 h	Not listed	Not listed	Not listed

**Persistence and Degradability** No information available.

**Bioaccumulation/ Accumulation** No information available

**Mobility** No information available

## 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

<b>UN-No</b>	UN1268
<b>Proper Shipping Name</b>	PETROLEUM DISTILLATES, N.O.S.
<b>Hazard Class</b>	3
<b>Packing Group</b>	II

### TDG

<b>UN-No</b>	UN1268
<b>Proper Shipping Name</b>	PETROLEUM DISTILLATES, N.O.S.
<b>Hazard Class</b>	3
<b>Packing Group</b>	II

### IATA

<b>UN-No</b>	UN1268
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**14. Transport information**

**Proper Shipping Name**      PETROLEUM DISTILLATES, N.O.S.  
**Hazard Class**                3  
**Packing Group**                II

**IMDG/IMO**

**UN-No**                                UN1268  
**Proper Shipping Name**      PETROLEUM DISTILLATES, N.O.S.  
**Hazard Class**                    3  
**Packing Group**                    II

**15. Regulatory information**

**International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Ligroine	X	X	-	232-453-7	-		X	-	X	X	X

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)**                                Not applicable

**SARA 313**                                    Not applicable

**SARA 311/312 Hazardous Categorization**

**Acute Health Hazard**                    Yes  
**Chronic Health Hazard**                Yes  
**Fire Hazard**                                Yes  
**Sudden Release of Pressure Hazard**    No  
**Reactive Hazard**                         No

**Clean Water Act**                        Not applicable

**Clean Air Act**                             Not applicable

**OSHA Occupational Safety and Health Administration**  
 Not applicable

**CERCLA**  
 Not Applicable

**California Proposition 65**                This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ligroine	-	X	X	-	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

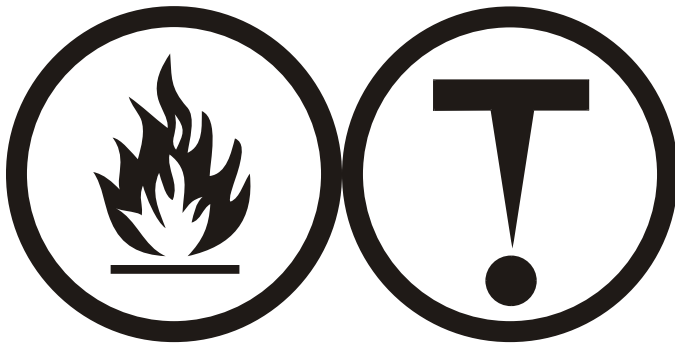
**Other International Regulations**

**Mexico - Grade** Serious risk, Grade 3

**Canada**

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

**WHMIS Hazard Class** B2 Flammable liquid  
 D2A Very toxic materials



## 16. Other information

**Prepared By** Regulatory Affairs  
 Thermo Fisher Scientific  
 Email: EMSDS.RA@thermofisher.com

**Creation Date** 11-Feb-2010

**Revision Date** 08-Apr-2014

**Print Date** 08-Apr-2014

**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**