SAFETY DATA SHEET

Petroleum Ether (35 - 60 °C)

This MSDS is valid for all grades and catalog #'s

1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals

Synonyms: Ligroine; Benzin; Petroleum Naphtha; Naphtha ASTM; Petroleum Spirits

Other means of identification: CAS No. 8032-32-4
EINECS No. 232-453-7

Recommended use of the chemical and restrictions on use:
General use solvent

Supplier Details:

Pharmco Products, Inc.
1101 Isaac Shelby Drive, Shelbyville,
KY 40065, USA.
Tel: 502.232.7600
Fax: 502.633.6100
CCN17213

Pharmco Products, Inc.
58 Vale Road, Brookfield,
CT 06804, USA.
Tel: 203.740.3471
Fax: 203.740.3481
CCN17213

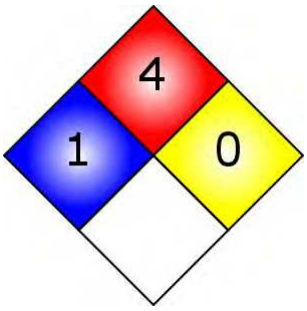
Emergency Contact: **CHEMTREC: 1.800.424.9300 (USA) / +1.703.527.3887 (International)**

2. HAZARDS IDENTIFICATION

OSHA Hazards:
Carcinogen, Flammable liquid, Mutagen, Target organ effect

Target Organs:
Central nervous system, Eyes, Respiratory system, Skin

NFPA



GHS label elements, including precautionary statements

Signal Word:
DANGER!

Hazard statement(s)

H224	Extremely flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273	Avoid release to the environment.
P331	Do NOT induce vomiting.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or a doctor/ physician.
P210	Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
P201	Obtain special instructions before use.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P280	Wear protective gloves and eye and face protection.

GHS Classification(s)

Aspiration hazard (Category 1)
Carcinogenicity (Category 1B)
Chronic aquatic toxicity (Category 2)
Flammable Liquids (Category 1)
Germ cell mutagenicity (Category 1B)
Reproductive toxicity (Category 2)
Skin irritation (Category 2)
Specific target organ toxicity - single exposure (Category 3)

Other hazards which do not result in classification:

Potential Health Effects:

Organ	Description
Eyes	Vapors may cause irritation. Splashes may cause redness and pain.
Ingestion	Local irritation with burning sensation in mouth, esophagus, and stomach. Vomiting, blurred vision, and diarrhea may also occur. Cases of chemical pneumonia have been reported from ingestion of this substance. Nervous system disorders paralleling those from inhalation exposure may also occur.
Inhalation	Inhalation may cause symptoms of intoxication and peripheral nerve disorders and central nervous system depression. Symptoms of overexposure include loss of appetite, muscle weakness, impairment of motor action, dizziness and drowsiness. May also cause throat irritation.
Skin	Can cause irritation. The liquid acts as a defatting agent on the skin.
Chronic	Prolonged overexposure may cause drying and cracking of the skin and associated dermatitis. No chronic systematic effects have been reported from widespread industrial use.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical identity: Petroleum Ether
Common name / Synonym: Ligroin; Benzin; Petroleum Naphtha; Naphtha ASTM; Petroleum Spirits
CAS number: 8032-32-4
EINECS number: 232-453-7
UN #: 1268
EC #: 649-263-00-9

% Weight	Material	CAS
90-100	Petroleum Ether	8032-32-4

4. FIRST AID MEASURES

General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Skin

Wash skin with soap and copious amounts of water. Seek medical attention.

Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Eyes

Flush eyes with water as a precaution.

Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

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5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Carbon oxides expected to be the primary hazardous combustion product.

Special protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

Flammable Properties

Flash point

-18 °C (-0.4 °F) - Closed Cup

Autoignition temperature

288 °C (550 °F)

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear respiratory protection. Do not inhale vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions:

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up:

Contain spill, then collect with an electrically protected vacuum cleaner or by wet-brushing and put the material into a convenient waste disposal container. Keep container closed.

7. HANDLING AND STORAGE

Precautions for safe handling:

Do not get on skin or in eyes. Do not inhale vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilites:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters, e.g., occupational exposure limit values or biological limit values:

Occupational Exposure Limits

Component	Source	Type	Value	Note
Petroleum Ether (35 - 60C)	US (OSHA)	STEL	400 ppm, 1800 mg/m3	29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants
Petroleum Ether (35 - 60C)	US (OSHA)	TWA	300 ppm, 1350 mg/m3	29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants

Appropriate engineering controls:

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

Individual protection measures, such as personal protective equipment:

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection:

Wear impervious, flame retardant, antistatic protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance *(physical state, color, etc.)*	Liquid. Colorless, clear.
Odor	Specific data not available
Odor threshold	Specific data not available
pH	Specific data not available
Freezing point	<-73 °C (<-99 °F)
Initial boiling point and boiling range	35 - 60 °C (95 - 140 °F)
Flash point	-18 °C (-0.4 °F) - Closed Cup
Evaporation rate	Specific data not available
Flammability (solid, gas)	Flammable
Upper / Lower flammability or explosive limits	5.9% (V) / 1.1% (V)
Vapor pressure	53.3 hPa (40.0 mmHg) at 20.0 °C (68.0 °F)
Vapor Density	2.5
Relative Density	Specific data not available
Solubility(ies)	Insoluble in water
Partition coefficient n-octanol/water(ies)	Specific data not available
Auto-ignition temperature	288 °C (550 °F)
Decomposition temperature	Specific data not available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapors may form explosive mixture with air.
Conditions to avoid (e.g., static discharge, shock or vibration)	Heat, flames, and sparks. Extreme temperatures and direct sunlight.
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Carbon oxides are expected to be, under fire conditions, the primary hazardous decomposition products.

11. TOXICOLOGICAL INFORMATION

- Petroleum Ether 8032-32-4

Product Summary:

Laboratory tests have shown mutagenic effects. No data available for the teratogenic or reproductive effects of the product. No data available to designate product as an aspiration hazard.

Acute Toxicity:

LC50 (Inhalation)	Rat	3400 ppm	4 hours
LD50 (Intravenous)	Mouse	40 mg/kg	

Irritation:

Eyes
No data available.

Respiratory or Skin Sensitization
No data available

Skin
No data available

Aspiration Hazard
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard

Specific target organ toxicity - single exposure (Globally Harmonized System)
Inhalation - May cause drowsiness or dizziness. - Central Nervous System

Carcinogenicity
IARC: Group 2B: Possibly carcinogenic to humans
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Potential human carcinogen

Other Hazards

Organ	Description
Eyes	Vapors may cause irritation. Splashes may cause redness and pain.
Ingestion	Local irritation with burning sensation in mouth, esophagus, and stomach. Vomiting, blurred vision, and diarrhea may also occur. Cases of chemical pneumonia have been reported from ingestion of this substance. Nervous system disorders paralleling those from inhalation exposure may also occur.

Inhalation	Inhalation may cause symptoms of intoxication and peripheral nerve disorders and central nervous system depression. Symptoms of overexposure include loss of appetite, muscle weakness, impairment of motor action, dizziness and drowsiness. May also cause throat irritation.
Skin	Can be irritating to the skin. The liquid acts as a defatting agent on the skin.
Chronic	Prolonged overexposure may cause drying and cracking of the skin and associated dermatitis. No chronic systematic effects have been reported from widespread industrial use.

12. ECOLOGICAL INFORMATION

- Petroleum Ether 8032-32-4

Ecotoxicity (aquatic and terrestrial, where available):
Ecotoxicity
No data available

Persistence and degradability:
No data available

Bioaccumulative potential:
No data available

Other adverse effects:
No data available

13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

UN number	1268
UN proper shipping name	Petroleum distillates, n.o.s.

Transport hazard class(es)	3
Packing group *(if applicable)*	I

IMDG
UN-Number: 1268 Class: 3 Packing Group: I
EMS-No: F-E, S-E
Proper shipping name: PETROLEUM DISTILLATES, N.O.S.
Marine pollutant: No
IATA
UN-Number: 1268 Class: 3 Packing Group: I
Proper shipping name: Petroleum distillates, n.o.s.

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question:

OSHA Hazards
Carcinogen, Flammable liquid, Mutagen, Target organ effect

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Chronic Health Hazard
Fire Hazard

CERCLA
No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components
Petroleum Ether CAS-No. 8032-32-4 Revision Date 2007-03-01

New Jersey Right To Know Components
Petroleum Ether CAS-No. 8032-32-4 Revision Date 2007-03-01

California Prop 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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16. OTHER INFORMATION:
INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

Disclaimer
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