SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Petroleum Ether
CAS number	8032-32-4
Synonyms	Ligroine; Benzine; Naphtha Petroleum; Naphtha Solvent

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Solvent, blowing agent for polystyrene, chemical intermediate.

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable Liquids	Category 2
Eye Irritation	Category 2B
Skin Irritation	Category 2
Specific Target Organ Toxicity - single exposure	Category 3
Aspiration Hazard	Category 1
Acute Aquatic Toxicity	Category 2

Chronic Aquatic Toxicity	Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Danger

Hazard statements:
Highly flammable liquid and vapor.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes eye irritation.
May cause drowsiness or dizziness.
Harmful to aquatic life.
Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention: Keep away from heat, open flames, and hot surface. No smoking. Wash hands thoroughly after handling. Ground/bond container and receiving equipment. Use explosion proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid release into the environment. Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Get emergency medical help immediately, call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs, get medical help. Take off contaminated clothing and wash it before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help.

Fire: In case of fire, use foam, Carbon dioxide, or dry powder for extinction.

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

Disposal: Collect spillage. Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
n-Pentane	-	109-66-0	73-77%
Isopentane	-	78-78-4	< 1%
Hexane, mixed isomers	-	92112-69-1	23-27%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled If breathing difficulties, dizziness, or light-headedness occur when working in areas with high vapor concentrations, remove victim to fresh air. If victim experiences continued breathing difficulties, keep patient warm and at rest, and seek medical attention. If breathing stops, begin artificial respiration and seek immediate medical attention.

In case of skin contact If this product comes into contact with the skin, wash with soap and water. Seek medical attention if irritation persists. Remove and wash contaminated clothing before re-use.

In case of eye contact If this product comes into contact with the eyes, flush with large quantities of water for several minutes, while gently holding the eyelids open. Seek medical attention if irritation persists.

If swallowed DO NOT INDUCE VOMITING. Give small quantities (<250 ml) of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Petroleum ether may cause dizziness and drowsiness if inhaled, and high concentrations may result in central nervous system depression and loss of consciousness. Symptoms of ingestion may include nausea, vomiting, as well as symptoms of dizziness, drowsiness, and central nervous system depression. If vomiting occurs, petroleum ether may be aspirated into the lungs, with a risk of chemical pneumonitis.

4.3 Indication of any immediate medical attention and special treatment needed

If ingested or inhaled, seek medical attention immediately.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use foam, Carbon dioxide, or dry powder extinguisher. Keep adjacent containers cool using water spray.

Unsuitable extinguishing media

For large fires, water spray should not be used, as petroleum ether is lighter than water and may form pools of burning liquid on top of water.

5.2 Specific hazards arising from the substance or mixture

Petroleum ether is extremely flammable. Remove all sources of ignition. Vapors are heavier than air and may travel considerable distances to a source of ignition and flash back. Vapor/air mixtures may be explosive. Electrostatic discharges may cause fire and/or explosion.

5.3 Special protective equipment and precautions for firefighters

Wear positive-pressure Self Contained Breathing Apparatus (SCBA).

5.4 Further information

Flash Point -40°F / -40°C

Autoignition Temperature No information available

Explosion limits

Upper 8.3% (v)

Lower 1.4% (v)

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
1	4	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all ignition sources and evacuate unnecessary personnel from the area. Ventilate the area if possible. Wear suitable protective clothing, including solvent resistant gloves and coveralls. If vapor concentrations are high, respiratory protective equipment may be required.

6.2 Environmental precautions

Prevent entry into sewers and watercourses. If product enters sewers or watercourses, inform the appropriate environmental authorities.

6.3 Methods and materials for containment and cleaning up

Small spills: Remove all ignition sources. Use non-sparking hand tools. Take precautions to avoid electrostatic discharge. Absorb spillage in a non-combustible absorbent, e.g. sand or vermiculite, and place in a suitable container for disposal.
Large spills: Remove all ignition sources. Use non-sparking hand tools. Contain spill and cover if possible to reduce evaporation. Transfer to a suitable container by mechanical means. Take precautions to avoid static discharge, e.g. by grounding containers, etc. Consider initial downwind evacuation for at least 300 meters (1,000 feet).

6.4 Reference to other sections

See Section 13 for disposal. Refer to Section 8 of SDS for personal protection details.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Avoid contact with skin and eyes. Use only in well-ventilated areas. Petroleum ether is extremely flammable. Avoid contact with all ignition sources, including hot surfaces. Take precautions to avoid electrostatic discharges, such as grounding of containers/equipment and restricting flow rates. Vapors are heavier than air and may accumulate in low lying areas and below ground areas such as ducts and sewers.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in a well-ventilated area, away from all ignition sources. If stored in drums, keep out of direct sunlight.

Incompatibilities

Strong oxidizing agents, strong acids, strong bases, and select amines.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
n-Pentane	TWA	1000 ppm 3000 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
n-Pentane	TWA	600 ppm 1800 mg/m3

Isopentane	TWA	600 ppm	1800 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value	
Hexane	IDLH	1100 ppm	
	TWA	50 ppm	180 mg/m3

Biological occupational exposure limits
No information available.

8.2 Exposure controls

Appropriate engineering controls
Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids. General mechanical ventilation may be sufficient to keep product vapor concentrations within specified time-weighted TLV ranges. If general ventilation proves inadequate to maintain safe vapor concentrations, supplemental local exhaust may be required. Other special precautions, such as respiratory masks or environmental containment devices, may be required in extreme cases.

Personal protective equipment

Eye/face protection
Wear suitable eye protection, safety glasses or goggles, when handling this product.

Skin protection
Wear suitable chemical resistant gloves recommended for use with hydrocarbon solvent. Nitrile gloves may be suitable, but glove manufacturers' specifications should always be checked first. Natural rubber gloves are not suitable. Change gloves in accordance with manufacturer recommendations. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.

Body Protection
Aprons or coveralls made of fire retardant material are recommended. These should be changed after use or if contaminated. Wash before re-use.

Respiratory protection
Use only in well-ventilated area. If high exposure levels are likely, then suitable respiratory protection will be required. Very high vapor concentrations may result in oxygen displacement and self-contained breathing apparatus or airline may be required.

Control of environmental exposure
Prevent entry into sewers and watercourses. If product enters sewers or watercourses, inform the appropriate environmental authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Gasoline-like
Odor Threshold	No information available
pH	No information available
Melting Point/Range	No information available
Boiling Point/Range	100-140°F/35-60°C
Evaporation Rate	No information available
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	8.30%
Lower	1.40%
Vapor Pressure	14.0 psia
Vapor Density	No information available
Density	0.64 kg/L
Solubility	Negligible
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	C6-16H12-34
Molecular Weight	82.2 g/mol
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Keep away from sources of ignition.

10.5 Incompatible materials

This product is incompatible with strong oxidizing agents, strong acids and bases, and selected amines.

10.6 Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO_2), Hydrocarbons.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Harmful when inhaled in high concentrations or ingested. Petroleum ether may cause dizziness and drowsiness if inhaled, and high concentrations may result in central nervous system depression, and loss of consciousness. Symptoms of ingestion may include nausea, vomiting, as well as symptoms of dizziness, drowsiness, and central nervous system depression. If vomiting occurs, petroleum ether may be aspirated into the lungs, with a risk of chemical pneumonitis.

Skin corrosion/irritation

Not corrosive.

Serious eye damage/eye irritation

Petroleum ether can be irritating to the eye, may cause redness.

Respiratory or skin sensitization

Not known to be a sensitizer. Harmful when inhaled in high concentrations or ingested.

Germ cell mutagenicity

Not expected to be mutagenic.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
n-Pentane	109-66-0	Not listed	Not listed	Not listed	Not listed	Not listed
Isopentane	78-78-4	Not listed	Not listed	Not listed	Not listed	Not listed
Hexane	92112-69-1	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

Not expected to be toxic to reproduction.

Chronic effects
Prolonged or repeated contact of this product will result in defatting of the skin, causing dryness and cracking.

11.2 Additional Information
The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity
Petroleum ether is classified as toxic to aquatic organisms and likely to cause long-term effects in the environment.

12.2 Persistence and degradability
Petroleum ether is readily biodegradable in aquatic systems; however, in view of its high evaporation rate, petroleum ether is expected to volatilize rapidly from water sources into the atmosphere, where it will be degraded by photochemical reaction.

12.3 Bio accumulative potential
No information available.

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Endocrine disrupting properties
No information available.

12.7 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 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.

SECTION 14: Transport information

DOT (US)

UN-no	UN1268
Proper Shipping Name	Petroleum Distillates, n.o.s.
Hazard Class	3
Packing Group	II

IMDG

UN-no	UN1268
Proper Shipping Name	Petroleum Distillates, n.o.s.
Hazard Class	3
Packing Group	II

IATA

UN-no	UN1268
Proper Shipping Name	Petroleum Distillates, n.o.s.
Hazard Class	3
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed, Hexane isomers.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Fire Hazard, Acute Health Hazard.

SARA 313 (TRI reporting)

Listed, Hexane isomers.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Listed, Pentane (CAS #109-66-0), TQ: 10000 lb.
Listed, Isopentane (CAS #78-78-4), TQ: 10000 lb.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, Petroleum Ether (CAS #8032-32-4).
Listed, Pentane (CAS #109-66-0).
Listed, Isopentane (CAS #78-78-4).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Petroleum Ether (CAS #8032-32-4).
Listed, Pentane (CAS #109-66-0).
Listed, Isopentane (CAS #78-78-4).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Petroleum Ether (CAS #8032-32-4).
Listed, Pentane (CAS #109-66-0).
Listed, Isopentane (CAS #78-78-4).

California Proposition 65

Not listed.

SECTION 16: Other information

Issue date: 11/16/2022
Revision 1: 09/01/2023
Revision 2: 10/08/2024

SECTION 17: 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.