

SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 01-Apr-2022
 Revision Number 1.06

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Petroleum Ether
Product Code	168-27535

Manufacturer FUJIFILM Wako Pure Chemical Corporation
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Recommended uses and restrictions on use For research use only

Section 2: HAZARDS IDENTIFICATION

GHS classification
Classification of the substance or mixture

Flammable liquids	Category 2
Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3
Category 3 Respiratory irritation, Narcotic effects	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 nervous system	
Aspiration hazard	Category 1

Pictograms



Signal word

Danger

Hazard statements

- H225 - Highly flammable liquid and vapor
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H332 - Harmful if inhaled
- H335 - May cause respiratory irritation
- H336 - May cause drowsiness or dizziness
- H304 - May be fatal if swallowed and enters airways
- H372 - Causes damage to the following organs through prolonged or repeated exposure: nervous system

Precautionary statements-(Prevention)

- Use only outdoors or in a well-ventilated area
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- Do not breathe dust/fume/gas/mist/vapors/spray
- Do not eat, drink or smoke when using this product
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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

Precautionary statements-(Response)

- Get medical advice/attention 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 advice/attention
- If skin irritation occurs: Get medical advice/attention
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- Call a POISON CENTER or doctor/physician if you feel unwell
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Do NOT induce vomiting
- In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary statements-(Storage)

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

Precautionary statements-(Disposal)

- Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Mixture

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Ligroine(Petroleum Ether)	90	114.00	2-6	公表	8032-32-4

Note on ISHL No.: * in the table means announced chemical substances.

Impurities and/or Additives: Not applicable

Substances Remarks: This Product includes the following componets. n-Hexane about 20%

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders

Use personal protective equipment as required.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

Water spray (fog), Carbon dioxide (CO₂), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Vapors or dust may form explosive mixtures with air

Special extinguishing method

No information available

Special protective actions for fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminant and methods and materials for cleaning up

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Recovery, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: HANDLING AND STORAGE

Handling

Technical measures

Highly flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agents. Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle In places other than those specified, should not be smoking or eating and drinking Should not be brought contaminated protective equipment and gloves to rest stops Deny unnecessary entry of non-emergency personnel to the handling area

Safety handling precautions

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Storage

Safe storage conditions

Storage conditions

Store away from sunlight in well-ventilated place at room temperature (preferably cool).
Keep container tightly closed.

Safe packaging material

Glass

Incompatible substances

Strong oxidizing agents

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

Chemical Name	JSOH (Japan)	ISHL (Japan)	ACGIH
Ligroine(Petroleum Ether) 8032-32-4	40ppm, 140mg/m ³ ; Hexane skin 100ppm, 300mg/m ³ ; Gasoline	N/A	TWA 500ppm, 1760mg/m ³ STEL 1000ppm, 3500mg/m ³ MAK;50ppm
Hexane	40ppm, 140mg/m ³ ; skin	ISHL/ACL: 40 ppm	TWA: 50 ppm Skin

Personal protective equipment

Respiratory protection	gas mask for organic gas
Hand protection	Impermeable protective gloves
Eye protection	protective eyeglasses or chemical safety goggles
Skin and body protection	Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES**Form**

Color	colorless
Turbidity	clear
Appearance	liquid

Odor

characteristic odor

Melting point/freezing point

no data available

Boiling point, initial boiling point and boiling range

no data available

Flammability

Highly flammable liquid and vapor

Evaporation rate:

no data available

Flammability (solid, gas):

no data available

Upper/lower flammability or explosive limits

Upper: 5.9 v/v%

Lower: 1.1 v/v%

Flash point

-17.8 °C

Auto-ignition temperature:

no data available

Decomposition temperature:

no data available

pH

no data available

Viscosity (coefficient of viscosity)

no data available

Dynamic viscosity

no data available

Solubilities

Ethanol and Diethyl ether : Very soluble . water : practically insoluble,or insoluble .

n-Octanol/water partition coefficient:(log Pow)

no data available

Vapour pressure

no data available

Specific Gravity / Relative density

0.620 - 0.660 g/mL

Vapour density

2.5 (air = 1)

Particle characteristics

no data available

Section 10: STABILITY AND REACTIVITY**Stability**

Reactivity no data available

Chemical stability Stable under recommended storage conditions.

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark

Incompatible materials

Strong oxidizing agents

Hazardous decomposition productsCarbon monoxide (CO), Carbon dioxide (CO₂)**Section 11: TOXICOLOGICAL INFORMATION****Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ligroine(Petroleum Ether)	>15,875 mg/kg (Rat)	N/A	> 3,175 mg/kg (Rabbit)
Hexane	15,800 mg/kg (Rat)	3297 mg/kg (Rabbit)	48000 ppm (Rat) 4 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas-source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust-source information	Acute toxicity -inhalation mist-source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ligroine(Petroleum Ether)	EC50:Pseudokirchneriella subcapitata 4700 mg/L 72 h	N/A	N/A
Hexane	N/A	LC50:Pimephales promelas 2.1 - 2.98 mg/L 96 h	LC50 : Daphnia magna 3.88 mg/L 48 h

Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Ligroine(Petroleum Ether)	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hexane	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Persistence and degradability	No information available
Bioaccumulative potential	No information available
Mobility in soil	No information available
Hazard to the ozone layer	No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

ADR/RID

UN number	UN1268
Proper shipping name:	Petroleum distillates, n.o.s. (Ligroine(Petroleum Ether))
UN classification	3
Subsidiary hazard class	
Packing group	II
Marine pollutant	Not applicable

IMDG

UN number	UN1268
Proper shipping name:	Petroleum distillates, n.o.s. (Ligroine(Petroleum Ether))
UN classification	3
Subsidiary hazard class	
Packing group	II
Marine pollutant (Sea)	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

IATA

UN number	UN1268
Proper shipping name:	Petroleum products, n.o.s. (Ligroine(Petroleum Ether))
UN classification	3
Subsidiary hazard class	
Packing group	II
Environmentally Hazardous Substance	Not applicable

Section 15: REGULATORY INFORMATION

International Inventories

EINECS/ELINCS -
TSCA -

Japanese regulations

Fire Service Act Category IV, Class I petroleums, dangerous grade 2
Poisonous and Deleterious Substances Control Law Not applicable
Industrial Safety and Health Act Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1)
 Dangerous Substances - Flammable Substance (Enforcement Order Attached Table 1 Item 4)
 Class 2 Organic Solvents (Enforcement Order Attached Table No.6-2, Ordinance on Prevention of Organic Solvent Poisoning Art.1, Para.1, Item 5)
 Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)
 Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9)No.329,520
Regulations for the carriage and storage of dangerous goods in ship Flammable Liquids (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law Flammable Liquids (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)
Marine Pollution Prevention Law Dangerous Substances
 Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Y
Pollutant Release and Transfer Register Law (~2023.3.31) Class 1
Class 1 - No. 392
Pollutant Release and Transfer Register Law (2023/4/1~) Class 1
Class 1 - No. 392
Export Trade Control Order Not applicable
Air Pollution Control Law Hazardous Air Pollutants
Industrial Safety and Health Law (~2024.3.31)

Law Name	Chemical Name in Regulation	Ordinance Number	Weight %
Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9, and Law Art.56-1)	Hexane	520	about 20%

Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2) (~2024.3.31)	Pollutant Release and Transfer Register Law (~2023.3.31)
Ligroine(Petroleum Ether) 8032-32-4 (90)	-	Applicable	Applicable

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)
<http://www.safe.nite.go.jp/japan/db.html>
 IATA dangerous Goods Regulations
 RTECS:Registry of Toxic Effects of Chemical Substances
 Japan Industrial Safety and Health Association GHS Model SDS
 Dictionary of Synthetic Organic Chemistry, SSOCJ, Koudansha Scientific Co.Ltd.
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
 etc

Disclaimer

This SDS is according to JIS Z 7253: 2019. The information provided in 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 guidance for safe handling, and is not to be considered 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 materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z7252(2019). *JIS: Japanese Industrial Standards

End of Safety Data Sheet