SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Petroleum ether, boiling range 35-60°C
Cat No.: 413140000; 413140010
Synonyms: Lignoïne
CAS-No: 64742-49-0
EC-No: 265-151-9

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

Recommended Use: Laboratory chemicals.
Uses advised against: No Information available

1.3. Details of the supplier of the safety data sheet

Company
UK entity/business name: Fisher Scientific UK
Bishop Meadow Road, Loughborough,
Leicestershire LE11 5RG, United Kingdom

EU entity/business name: Acros Organics BVBA
Janssen Pharmaceuticalaan 3a
2440 Geel, Belgium

E-mail address: begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11
Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC Tel. No.US: 001-800-424-9300 / Europe: 001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards
Flammable liquids
Category 2 (H225)

Health hazards
Aspiration Toxicity
Category 1 (H304)
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2.2. Label elements

Signal Word  Danger

Hazard Statements
H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P262 - Do not get in eyes, on skin, or on clothing
P273 - Avoid release to the environment
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P240 - Ground and bond container and receiving equipment
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
<th>CLP Classification - Regulation (EC) No 1272/2008</th>
</tr>
</thead>
</table>
| Naphtha (petroleum), hydrotreated light        | 64742-49-0 | EEC No. 265-151-9 | >95      | Flam. Liq. 2 (H225)  
|                                                |                     |              |          | Asp. Tox. 1 (H304)  
|                                                |                     |              |          | Skin Irrit. 2 (H315) 
|                                                |                     |              |          | STOT SE 3 (H336)    
|                                                |                     |              |          | Aquatic Chronic 2 (H411) |
**SECTION 4: FIRST AID MEASURES**

4.1. Description of first aid measures

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.

Ingestion
Aspiration hazard. Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.

Inhalation
Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; use artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention. If not breathing, give artificial respiration. Risk of serious damage to the lungs (by aspiration).

Self-Protection of the First Aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically. Symptoms may be delayed.

**SECTION 5: FIREFIGHTING MEASURES**

5.1. Extinguishing media

Suitable Extinguishing Media
CO₂, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons
Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

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. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO₂).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**
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6.1. Personal precautions, protective equipment and emergency procedures
Use personal protective equipment as required. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing.

6.2. Environmental precautions
Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up
Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

6.4. Reference to other sections
Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Use only under a chemical fume hood. Wear personal protective equipment/face protection. Use spark-proof tools and explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany)
Class 3

7.3. Specific end use(s)
Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
Exposure limits
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Biological limit values
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies
Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS70 General methods for sampling airborne gases and vapours
MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography
MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Derived No Effect Level (DNEL) No information available

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Acute effects (local)</th>
<th>Acute effects (systemic)</th>
<th>Chronic effects (local)</th>
<th>Chronic effects (systemic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

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. Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment
Eye Protection Wear safety glasses with side shields (or goggles) (European standard - EN 166)
Hand Protection Protective gloves

<table>
<thead>
<tr>
<th>Glove material</th>
<th>Breakthrough time</th>
<th>Glove thickness</th>
<th>EU standard</th>
<th>Glove comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile rubber</td>
<td>See manufacturers</td>
<td>-</td>
<td>EN 374</td>
<td>(minimum requirement)</td>
</tr>
<tr>
<td>Viton (R)</td>
<td>recommendations</td>
<td>-</td>
<td></td>
<td>(minimum requirement)</td>
</tr>
</tbody>
</table>

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

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task. Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

Respiratory Protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use
Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
**Recommended Filter type:** low boiling organic solvent Type AX Brown conforming to EN371
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Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State

Liquid

Appearance

Colorless

Odor

Petroleum distillates

Odor Threshold

No data available

Melting Point/Range

No data available

Softening Point

No data available

Boiling Point/Range

35 - 60 °C / 95 - 140 °F

Flammability (liquid)

Highly flammable

On basis of test data

Flammability (solid,gas)

Not applicable

Liquid

Explosion Limits

Lower 0.8 vol%

Upper 7.4 vol%

Flash Point

-30 °C / -22 °F

Method - No information available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

pH

No information available

Viscosity

No data available

Water Solubility

No information available

Solubility in other solvents

No information available

Partition Coefficient (n-octanol/water)

No data available

Vapor Pressure

No data available

Density / Specific Gravity

0.648

Bulk Density

Not applicable

Vapor Density

> 1 (Air = 1.0)

Particle characteristics

Not applicable (liquid)

9.2. Other information

Explosive Properties

Vapors may form explosive mixtures with air

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

Hazardous Polymerization

Hazardous polymerization does not occur.

Hazardous Reactions

None under normal processing.

10.4. Conditions to avoid
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Keep away from open flames, hot surfaces and sources of ignition. Incompatible products. Excess heat.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂).

---

**SECTION 11: TOXICOLOGICAL INFORMATION**

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Product Information**

(a) acute toxicity;

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated light</td>
<td>LD50 &gt; 5000 mg/kg (Rat)</td>
<td>LD50 &gt; 3160 mg/kg (Rabbit)</td>
<td>LC50 = 73680 ppm (Rat) 4 h</td>
</tr>
</tbody>
</table>

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

<table>
<thead>
<tr>
<th>Component</th>
<th>Respiratory</th>
<th>Skin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated light</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

(e) germ cell mutagenicity; No data available

(f) carcinogenicity;

Not classified

The table below indicates whether each agency has listed any ingredient as a carcinogen. The classification as a carcinogen need not apply if the full refining history is known and it can be shown that the substance from which it is produced is not a carcinogen. This note applies only to certain complex oil derived substances in Annex I.

<table>
<thead>
<tr>
<th>Component</th>
<th>EU</th>
<th>UK</th>
<th>Germany</th>
<th>IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated light</td>
<td>Carc Cat. 1B</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(g) reproductive toxicity; No data available

(h) STOT-single exposure;

Results / Target organs

Central nervous system (CNS).

(i) STOT-repeated exposure;

Target Organs

No information available.
11.2. Information on other hazards

**Endocrine Disrupting Properties**
Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1. Toxicity

**Ecotoxicity effects**
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Fish</th>
<th>Water Flea</th>
<th>Freshwater Algae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated light</td>
<td>LC50: = 8.41 mg/L, 96h semi-static, closed (Oncorhynchus mykiss)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

- **Persistence**
  Persistence is unlikely, based on information available.

- **Degradation in sewage treatment plant**
  Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

#### 12.3. Bioaccumulative potential
Bioaccumulation is unlikely

#### 12.4. Mobility in soil
The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air

#### 12.5. Results of PBT and vPvB assessment
Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

#### 12.6. Endocrine disrupting properties

**Endocrine Disruptor Information**
This product does not contain any known or suspected endocrine disruptors

#### 12.7. Other adverse effects

- **Persistent Organic Pollutant**
  This product does not contain any known or suspected substance

- **Ozone Depletion Potential**
  This product does not contain any known or suspected substance

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

**Waste from Residues/Unused Products**
Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
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Contaminated Packaging
Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

European Waste Catalogue (EWC)
According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

Other Information
Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number  UN1268
14.2. UN proper shipping name Petroleum distillates, n.o.s
14.3. Transport hazard class(es) 3
14.4. Packing group II

ADR

14.1. UN number  UN1268
14.2. UN proper shipping name Petroleum distillates, n.o.s
14.3. Transport hazard class(es) 3
14.4. Packing group II

IATA

14.1. UN number  UN1268
14.2. UN proper shipping name Petroleum distillates, n.o.s
14.3. Transport hazard class(es) 3
14.4. Packing group II

14.5. Environmental hazards
Dangerous for the environment
Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6. Special precautions for user
No special precautions required

14.7. Maritime transport in bulk according to IMO instruments
Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories
X = listed, Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC), Japan (ENCS), Australia (AICS), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>AICS</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated light</td>
<td>265-151-9</td>
<td>-</td>
<td>NLP</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>KE-2562 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum),</td>
<td>Use restricted. See item 28.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

National Regulations

WGK Classification

See table for values

<table>
<thead>
<tr>
<th>Component</th>
<th>Germany - Water Classification (VwVwS)</th>
<th>Germany - TA-Luft Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated light</td>
<td></td>
<td>WGK2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>France - INRS (Tables of occupational diseases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated light</td>
<td>Tableaux des maladies professionnelles (TMP) - RG 84</td>
</tr>
</tbody>
</table>

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H411 - Toxic to aquatic life with long lasting effects

Legend

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

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Key literature references and sources for data
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.
Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.
Chemical incident response training.

Creation Date 26-Nov-2009
Revision Date 21-Dec-2020
Revision Summary Update to CLP Format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
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, use, processing, storage, transportation, disposal and release 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

End of Safety Data Sheet