

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 11-Jan-2012 Revision Date 20-Oct-2023 Revision Number 6

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

### 1.1. Product identifier

Product Description: Petroleum ether 30-40°C

Cat No.: P/1400/21, P/1400/25, P/1400/07, P/1400/08, P/1400/MS21, P/1400/21RSS,

P/1400/24RSS, P/1400/25RSS, P/1400/34RSS, P/1400/27RSS

**Synonyms** Ether, petroleum; Ligroine

 Index No
 649-328-00-1

 CAS No
 64742-49-0

 EC No
 265-151-9

 Molecular Formula
 C5H12

# 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

Thermo Fisher Scientific

Janssen Pharmaceuticalaan 3a

2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

Tel: 01509 231166

Chemtrec US: (800) 424-9300 Chemtrec EU: 001-703-527-3887

# **SECTION 2: HAZARDS IDENTIFICATION**

# 2.1. Classification of the substance or mixture

CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

**Physical hazards** 

Flammable liquids Category 1 (H224)

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### **Health hazards**

Aspiration Toxicity
Skin Corrosion/Irritation
Category 1 (H304)
Category 2 (H315)
Specific target organ toxicity - (single exposure)
Category 3 (H336)

### **Environmental hazards**

Chronic aquatic toxicity Category 2 (H411)

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



Signal Word

**Danger** 

#### **Hazard Statements**

H224 - Extremely 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**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P331 - Do NOT induce vomiting

P273 - Avoid release to the environment

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

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)

This product does not contain any known or suspected endocrine disruptors

# **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

### 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Petroleum ether	64742-49-0	EEC No. 265-151-9	>95	Flam. Liq. 1 (H224) Asp. Tox. 1 (H304)

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		Skin Irrit. 2 (H315)
		STOT SE 3 (H336)
		Aquatic Chronic 2 (H411)

Full text of Hazard Statements: see section 16

# **SECTION 4: FIRST AID MEASURES**

### 4.1. Description of first aid measures

General Advice Immediate medical attention is required. Show this safety data sheet to the doctor in

attendance.

**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 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. If breathing is difficult, give oxygen. Do not use mouth-to-mouth

method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get

medical attention. Aspiration into lungs can produce severe lung damage.

**Self-Protection of the First Aider** Remove all sources of ignition.

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**

Water spray, carbon dioxide (CO2), dry chemical, 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

Flash back possible over considerable distance. Extremely flammable. 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 (CO2).

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

# **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation. Avoid contact with skin, eyes and inhalation of vapors.

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.

## 6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. 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

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

#### **Hygiene Measures**

When using do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat, sparks and flame.

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

#### 7.3. Specific end use(s)

Use in laboratories

# **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

# 8.1. Control parameters

**Exposure limits** 

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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

# Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Petroleum ether 64742-49-0 ( >95 )	DNEL = 1066.67mg/m <sup>3</sup>	DNEL = 1286.4mg/m <sup>3</sup>	DNEL = 837.5mg/m <sup>3</sup>	

### **Predicted No Effect Concentration (PNEC)**

No information available.

### 8.2. Exposure controls

# **Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment.

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

ſ	Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
1	Nitrile rubber	> 480 minutes	0.5 - 0.6 mm	EN 374 Level 6	As tested under EN374-3 Determination of
					Resistance to Permeation by Chemicals
	Viton (R)	> 240 minutes	0.7 mm		

**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 compatability, 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

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Recommended Filter type: low boiling organic solvent Type AX Brown conforming to

EN371

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure Small scale/Laboratory use

limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN

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

**Environmental exposure controls** Do not allow material to contaminate ground water system. Prevent product from entering

drains.

# **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1. Information on basic physical and chemical properties

**Physical State** Liquid

Clear **Appearance** 

Petroleum distillates Odor **Odor Threshold** No data available **Melting Point/Range** -130 °C / -202 °F **Softening Point** No data available

**Boiling Point/Range** 30 - 40 °C / 86 - 104 °F @ 760 mmHg Flammability (liquid) On basis of test data Highly flammable

Flammability (solid,gas) Not applicable Liquid

**Explosion Limits** Lower 1.5 vol% Upper 7.8 vol%

Flash Point -49 °C / -56.2 °F

Method - No information available 260 °C / 500 °F **Autoignition Temperature** 

**Decomposition Temperature** No data available рΗ Not applicable No data available Viscosity Water Solubility Immiscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

log Pow Component

Petroleum ether

**Vapor Pressure** 514 mmHg @ 25 °C

Density / Specific Gravity 0.63

**Bulk Density** Not applicable Liquid **Vapor Density** (Air = 1.0)

**Particle characteristics** Not applicable (liquid)

### 9.2. Other information

Molecular Formula C5H12 **Molecular Weight** 72.15

**Explosive Properties** Vapors may form explosive mixtures with air

**Evaporation Rate** 28.6 - (Butyl Acetate = 1.0)

# **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

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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

Incompatible products. Excess heat. Keep away from open flames, hot surfaces and

sources of ignition.

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;

OralBased on available data, the classification criteria are not metDermalBased on available data, the classification criteria are not metInhalationBased on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation		
Petroleum ether	LD50 > 5000 mg/kg (Rat)	LD50 > 3160 mg/kg (Rabbit)	LC50 = 73680 ppm (Rat) 4 h		

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;

Respiratory

Skin

Based on available data, the classification criteria are not met Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Based on available data, the classification criteria are not met

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.

Component	EU	UK	Germany	IARC
Petroleum ether	Carc Cat. 1B			

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Category 3

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Results / Target organs Central nervous system (CNS).

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

**Target Organs** None known.

Category 1 (j) aspiration hazard;

delayed

Symptoms / effects,both acute and Inhalation of high vapor concentrations may cause symptoms like headache, dizziness,

tiredness, nausea and vomiting.

### 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

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic **Ecotoxicity effects** 

environment. The product contains following substances which are hazardous for the

environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Petroleum ether	LC50: = 8.41 mg/L, 96h semi-static, closed (Oncorhynchus mykiss)		

### 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

	Component	log Pow	Bioconcentration factor (BCF)
1	etroleum ether	4	No data available

#### The product contains volatile organic compounds (VOC) which will evaporate easily from all 12.4. Mobility in soil

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

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Persistent Organic Pollutant Ozone Depletion Potential This product does not contain any known or suspected substance
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.

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

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. Do not empty into drains. Do not let this

chemical enter the environment.

# **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 I

<u>ADR</u>

**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 I

**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 3

**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 Not applicable, packaged goods according to IMO instruments

# **SECTION 15: REGULATORY INFORMATION**

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

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**International Inventories** 

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Petroleum ether	64742-49-0	265-151-9	-	-	X	X	KE-25623	-	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Petroleum ether	64742-49-0	X	ACTIVE	Х	-	Х	Х	X

**Legend:** X - Listed '-' - Not Listed

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

### Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Petroleum ether	64742-49-0	-	Use restricted. See item 28. (see link for restriction details) Use restricted. See item 29. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-

### **REACH links**

https://echa.europa.eu/substances-restricted-under-reach

# Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -
	5.15.15	Qualifying Quantities for Major Accident	` ,
		Notification	Requirements
Petroleum ether	64742-49-0	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

### **National Regulations**

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

WGK Classification See table for values

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Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Petroleum ether	WGK2	

Component	France - INRS (Tables of occupational diseases)	
Petroleum ether	Tableaux des maladies professionnelles (TMP) - RG 84	

### 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

H224 - Extremely 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

TSCA - United States Toxic Substances Control Act Section 8(b)

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic

Substances/EU List of Notified Chemical Substances

Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances **IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances NZIoC - New Zealand Inventory of Chemicals

**ENCS** - Japanese Existing and New Chemical Substances AICS - Australian Inventory of 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

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

ADR - European Agreement Concerning the International Carriage of

Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air **Transport Association** 

MARPOL - International Convention for the Prevention of Pollution from

Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

### 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

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts. Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

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Creation Date11-Jan-2012Revision Date20-Oct-2023Revision SummaryNot applicable.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

### 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**