

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

Creation Date 14-Sep-2009

Revision Date 29-Sep-2023

Revision Number 11

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

1.1. Product identifier

| Product Description: | <u>n-Heptane</u> |
|---------------------------|---------------------------------|
| Cat No. : | 326690000; 326690010; 326690025 |
| Synonyms | Normal heptane.; Heptane |
| Index No | 601-008-00-2 |
| CAS No | 142-82-5 |
| EC No | 205-563-8 |
| Molecular Formula | C7 H16 |
| REACH registration number | 01-2119457603-38 |

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

| Recommended Use | Laboratory chemicals. |
|--------------------------------|---|
| Sector of use | SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Product category | PC21 - Laboratory chemicals |
| Process categories | PROC15 - Use as a laboratory reagent |
| Environmental release category | ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) |
| Uses advised against | No Information available |

1.3. Details of the supplier of the safety data sheet

| Com | pany |
|-----|------|
| | |

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

For information **US** call: 001-800-227-6701 / **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 - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Physical hazards

n-Heptane

Flammable liquids Category 2 (H225) Health hazards Aspiration Toxicity Category 1 (H304) Skin Corrosion/Irritation Category 2 (H315) Category 3 (H336)

Specific target organ toxicity - (single exposure)

Environmental hazards

Acute aquatic toxicity Chronic aquatic toxicity Category 1 (H400) Category 1 (H410)

Full text of Hazard Statements: see section 16



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
- H410 Very toxic to aquatic life with long lasting effects

Precautionary Statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- 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
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water
- P273 Avoid release to the environment

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 |
|-----------|--------|-------|----------|-----------------------------------|
| | | | | |

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| | | | | GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|-----------|----------|-------------------|-----|---|
| n-Heptane | 142-82-5 | EEC No. 205-563-8 | >95 | Flam. Liq. 2 (H225) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) STOT SE 3 (H336) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) |

| Component | Specific concentration limits (SCL's) | M-Factor | Component notes |
|-----------|--|----------|-----------------|
| n-Heptane | - | 1 | - |

| REACH registration number | 01-2119457603-38 |
|---------------------------|------------------|

Full text of Hazard Statements: see section 16

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 | 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; 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. Risk of serious damage to the lungs (by aspiration). If not breathing, give artificial respiration. |
| 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

n-Heptane

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. Do not allow run-off from fire-fighting to enter drains or water courses.

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. 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. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

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

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. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. 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. Wash hands before breaks and immediately after handling the product. 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 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

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

| Component | The United Kingdom | European Union | Ireland |
|-----------|-------------------------------------|----------------------------------|-------------------------------------|
| n-Heptane | STEL: 1500 ppm 15 min | TWA: 500 ppm (8h) | TWA: 500 ppm 8 hr. |
| | STEL: 6255 mg/m ³ 15 min | TWA: 2085 mg/m ³ (8h) | TWA: 2085 mg/m ³ 8 hr. |
| | TWA: 500 ppm 8 hr | | STEL: 1500 ppm 15 min |
| | TWA: 2085 mg/m ³ 8 hr | | STEL: 6255 mg/m ³ 15 min |

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 (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|-------------------------------|---------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| n-Heptane 142-82-5 (>95) | | | | DNEL = 300mg/kg bw/day |

| Component | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|-------------------------------|-------------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
| n-Heptane 142-82-5 (>95) | | | | DNEL = 2085mg/m ³ |

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 |

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| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments | |
|--|--|--|--------------------------|--|--|
| Nitrile rubber | > 480 minutes | 0.38 mm | Level 6 | (minimum requirement) | |
| Neoprene gloves | > 480 minutes | 0.45 mm | EN 374 | | |
| Viton (R) | > 480 minutes | 0.3 mm | | | |
| Skin and body prot | ection Wear ap | propriate protective | gloves and clothing to p | prevent skin exposure. | |
| (Refer to manufacturer/s Ensure gloves are suitat | uctions regarding permi- supplier for information) ole for the task: Chemic o take into consideration | al compatability, Dex the specific local co | terity, Operational cond | ovided by the supplier of the gloves. ditions, User susceptibility, e.g. he product is used, such as the danger | |
| | C C | | | | |
| Respiratory Protect | tion No prote | No protective equipment is needed under normal use conditions. | | | |
| are Re | | 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: Organic gases and vapours filter Type A Brown conforming EN14387 | | | |
| Small scale/Laboratory | approve experier | d respirator if exposunced. | ire limits are exceeded | or European Standard EN 149:2001 or if irritation or other symptoms are 5; or; Half mask: EN140; plus filter, EN | |

| Environmental exposure controls | Prevent product from entering drains. Do not allow material to contaminate ground water |
|---------------------------------|---|
| | system. Local authorities should be advised if significant spillages cannot be contained. |

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 | -91 °C / -131.8 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | 98 °C / 208.4 °F | |
| Flammability (liquid) | Highly flammable | On |
| Flammability (solid,gas) | Not applicable | Liqu |
| Explosion Limits | Lower 1 vol% | |
| | Upper 7 vol% | |
| Flash Point | -4 °C / 24.8 °F | Met |
| Autoignition Temperature | 215 °C / 419 °F | |
| Decomposition Temperature | No data available | |
| рН | No information available | |
| Viscosity | 0.4 mPa s at 20 °C | |
| Water Solubility | Insoluble | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/wat | er) | |
| Component | log Pow | |
| n-Heptane | 4.66 | |
| Vapor Pressure | 48 mbar @ 20 °C | |
| Density / Specific Gravity | 0.683 | |

On basis of test data Liquid

Method - No information available

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| Bulk Density | Not applicable | Liquid |
|--------------------------|-------------------------|-------------|
| Vapor Density | 3.5 | (Air = 1.0) |
| Particle characteristics | Not applicable (liquid) | |

9.2. Other information

n-Heptane

Molecular Formula Molecular Weight Explosive Properties Evaporation Rate C7 H16 100.20 Vapors may form explosive mixtures with air 2.8 (Butyl Acetate = 1.0)

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 react | ions |
| Hazardous Polymerization Hazardous Reactions | Hazardous polymerization does not occur. None under normal processing. |
| 10.4. Conditions to avoid | Incompatible products. Heat, flames and sparks. 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 |
|-----------|-------------------|----------------------------|---------------------------|
| n-Heptane | >2000 mg/kg (rat) | LD50 = 3000 mg/kg (Rabbit) | LC50 > 73.5 mg/L (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;

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| 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 |
| | There are no known carcinogenic chemicals in this product |
| (g) reproductive toxicity; | Based on available data, the classification criteria are not met |
| (h) STOT-single exposure; | Category 3 |
| 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. |
| (j) aspiration hazard; | Category 1 |
| Symptoms / effects,both acute and delayed | 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 |

y known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity Ecotoxicity effects

n-Heptane

Very 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.

| Component | Freshwater Fish | Water Flea | Freshwater Algae |
|-----------|---|--------------------|------------------|
| n-Heptane | LC50: = 375.0 mg/L, 96h (Cichlid fish) | EC50: >10 mg/L/24h | |

| Component | Microtox | M-Factor |
|-----------|----------|----------|
| n-Heptane | | 1 |

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

Product has a high potential to bioconcentrate

| Component | log Pow | Bioconcentration factor (BCF) |
|-----------|---------|-------------------------------|
| n-Heptane | 4.66 | No data available |

| <u>12.4. Mobility in soil</u> | The product is insoluble and floats on water Spillage unlikely to penetrate soil The product is insoluble and floats on water. Is not likely mobile in the environment due its low water solubility. Is not likely mobile in the environment due its low water solubility and propensity to bind to soil particles |
|---|--|
| <u>12.5. Results of PBT and vPvB</u> assessment | Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB). |
| <u>12.6. Endocrine disrupting</u> properties Endocrine Disruptor Information | This product does not contain any known or suspected endocrine disruptors |
| <u>12.7. Other adverse effects</u> 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. 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

n-Heptane

| 14.1. UN number | UN1206 |
|----------------------------------|----------|
| 14.2. UN proper shipping name | Heptanes |
| 14.3. Transport hazard class(es) | 3 |
| 14.4. Packing group | II |

<u>ADR</u>

| <u>14.1. UN number</u> | UN1206 |
|----------------------------------|----------|
| 14.2. UN proper shipping name | Heptanes |
| 14.3. Transport hazard class(es) | 3 |
| 14.4. Packing group | II |

<u>IATA</u>

| <u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u> | UN1206 Heptanes 3 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

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 |
|-----------|----------|-----------|---------|--------------------|-------|------|----------|-------|-------|
| n-Heptane | 142-82-5 | 205-563-8 | - | - | X | Х | KE-18271 | Х | Х |
| | | | | | | | | | |
| Component | CAS No | TSCA | | ventory ation - | DSL | NDSL | AICS | NZIoC | PICCS |
| | | | Active- | Inactive | | | | | |
| n-Heptane | 142-82-5 | Х | AC | TIVE | Х | - | Х | Х | Х |

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) |
|-----------|----------|---|--|---|
| n-Heptane | 142-82-5 | - | 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) - Qualifying Quantities for Major Accident | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report | |
|-----------|----------|---|--|--|
| | | Notification | Requirements | |
| n-Heptane | 142-82-5 | 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)?

n-Heptane

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 .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

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

WGK Classification

See table for values

| Component | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|-----------|---------------------------------------|-------------------------|
| n-Heptane | WGK2 | |

| Component | France - INRS (Tables of occupational diseases) |
|-----------|--|
| n-Heptane | Tableaux des maladies professionnelles (TMP) - RG 84 |

| Component | Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81) | Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC) | Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure |
|----------------------------|--|---|--|
| n-Heptane 142-82-5(>95) | Prohibited and Restricted Substances | Group I | |

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer

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
- H400 Very toxic to aquatic life
- H410 Very toxic to aquatic life with long lasting effects

Legend

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

 CAS - Chemical Abstracts Service
 TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

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

 PICCS - Philippines Inventory of Chemicals and Chemical Substances IECSC - Chinese Inventory of Existing Chemical Substances
 ENCS - Japanese Existing and New Chemical Substances NZIOC - New Zealand Inventory of Chemicals

 WEL - Workplace Exposure Limit
 TWA - Time Weighted Average

ACGIH - American Conference of Governmental Industrial Hygienists DNEL - Derived No Effect Level RPE - Respiratory Protective Equipment

n-Heptane

LC50 - Lethal Concentration 50% NOEC - No Observed Effect Concentration PBT - Persistent, Bioaccumulative, Toxic EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

 ge of
 ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

 aritime
 MARPOL - International Convention for the Prevention of Pollution from Ships

 ent
 ATE - Acute Toxicity Estimate VOC - (Volatile Organic Compound)

 ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
 ICAO/

 IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
 MARP

 OECD - Organisation for Economic Co-operation and Development
 ATE

 BCF - Bioconcentration factor
 VOC

 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

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts. Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Chemical incident response training.

| Creation Date | 14-Sep-2009 |
|------------------|-----------------|
| Revision Date | 29-Sep-2023 |
| Revision Summary | Not 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