

Creation Date 13-Sep-2010

Revision Date 25-Sep-2023

Revision Number 9

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

### 1.1. Product identifier

|                             |   |
|-----------------------------|---|
| <b>Product Description:</b> | <b>n-Hexadecane</b>   |
| <b>Cat No. :</b>            | <b>120460000; 120460020; 120460025; 120460100; 120461000; 120465000</b> |
| <b>Synonyms</b>             | N-Cetane; Cetane; N-Hexadecane.   |
| <b>CAS No</b>               | 544-76-3  |
| <b>EC No</b>                | 208-878-9   |
| <b>Molecular Formula</b>    | C16 H34   |

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

|                                       |   |
|---------------------------------------|---|
| <b>Recommended Use</b>                | Laboratory chemicals.   |
| <b>Sector of use</b>                  | SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites    |
| <b>Product category</b>               | PC21 - Laboratory chemicals   |
| <b>Process categories</b>             | PROC15 - Use as a laboratory reagent  |
| <b>Environmental release category</b> | ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) |
| <b>Uses advised against</b>           | 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 Pharmaceuticaaan 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

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

#### Physical hazards

Based on available data, the classification criteria are not met

# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

## Health hazards

Aspiration Toxicity

Category 1 (H304)

## Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Danger

## Hazard Statements

H304 - May be fatal if swallowed and enters airways

EUH066 - Repeated exposure may cause skin dryness or cracking

## Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection

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

P331 - Do NOT induce vomiting

## 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 % | GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|------------|----------|-------------------|----------|---|
| Hexadecane | 544-76-3 | EEC No. 208-878-9 | >95      | Asp. Tox. 1 (H304)<br>(EUH066)  |

Full text of Hazard Statements: see section 16

# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|   |   |
|---|---|
| <b>General Advice</b>                     | If symptoms persist, call a physician.  |
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.   |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.   |
| <b>Ingestion</b>                          | Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward. |
| <b>Inhalation</b>                         | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. Risk of serious damage to the lungs (by aspiration).                                   |
| <b>Self-Protection of the First Aider</b> | 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

None reasonably foreseeable.

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

**Notes to Physician** Aspiration hazard. Treat symptomatically. Symptoms may be delayed.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

### 5.2. Special hazards arising from the substance or mixture

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

#### **Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

### 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

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

Use personal protective equipment as required. Ensure adequate ventilation.

# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

## 6.2. Environmental precautions

Should not be released into the environment.

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

Soak up with inert absorbent material. 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

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing.

#### **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.

**Technical Rules for Hazardous Substances (TRGS) 510**      Class 10  
**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):

#### **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)**

No information available

# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

## Predicted No Effect Concentration (PNEC)

No information available.

## 8.2. Exposure controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

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

Goggles (European standard - EN 166)

#### Hand Protection

Protective gloves

| Glove material | Breakthrough time                 | Glove thickness | EU standard | Glove comments        |
|----------------|-----------------------------------|-----------------|-------------|-----------------------|
| Viton (R)      | See manufacturers recommendations | -               | EN 374      | (minimum requirement) |

#### Skin and body protection

Long sleeved clothing.

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:** Organic gases and vapours filter Type A Brown conforming to EN14387

#### 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

No information available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

#### Physical State

Liquid

#### Appearance Odor

Colorless  
No information available

# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

|   |                          |                                   |
|---|--------------------------|-----------------------------------|
| Odor Threshold                          | No data available        |                                   |
| Melting Point/Range                     | 18 °C / 64.4 °F          |                                   |
| Softening Point                         | No data available        |                                   |
| Boiling Point/Range                     | 287 °C / 548.6 °F        |                                   |
| Flammability (liquid)                   | No data available        |                                   |
| Flammability (solid,gas)                | Not applicable           | Liquid                            |
| Explosion Limits                        | No data available        |                                   |
| Flash Point                             | 135 °C / 275 °F          | Method - No information available |
| Autoignition Temperature                | 205 °C / 401 °F          |                                   |
| Decomposition Temperature               | No data available        |                                   |
| pH                                      | No information available |                                   |
| Viscosity                               | No data available        |                                   |
| Water Solubility                        | Insoluble                |                                   |
| Solubility in other solvents            | No information available |                                   |
| Partition Coefficient (n-octanol/water) |                          |                                   |
| Vapor Pressure                          | No data available        |                                   |
| Density / Specific Gravity              | 0.773                    |                                   |
| Bulk Density                            | Not applicable           | Liquid                            |
| Vapor Density                           | No data available        | (Air = 1.0)                       |
| Particle characteristics                | Not applicable (liquid)  |                                   |

## 9.2. Other information

|                   |         |
|-------------------|---------|
| Molecular Formula | C16 H34 |
| Molecular Weight  | 226.44  |

## 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 | No information available.     |
| Hazardous Reactions      | None under normal processing. |

### 10.4. Conditions to avoid

Incompatible products. Excess heat.

### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: TOXICOLOGICAL INFORMATION

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

#### Product Information

(a) acute toxicity;

# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

**Oral**  
**Dermal**  
**Inhalation**

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

| Component  | LD50 Oral | LD50 Dermal                  | LC50 Inhalation |
|------------|-----------|------------------------------|-----------------|
| Hexadecane | -         | LD50 > 3160 mg/kg ( Rabbit ) | -               |

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

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

(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** 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**

Do not empty into drains. .

### 12.2. Persistence and degradability

**Persistence**

Insoluble in water.

# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

|   |  |
|---|--|
| <b>12.3. Bioaccumulative potential</b>  | May have some potential to bioaccumulate   |
| <b>12.4. Mobility in soil</b>   | 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. |
| <b>12.5. Results of PBT and vPvB assessment</b>   | Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).                             |
| <b>12.6. Endocrine disrupting properties</b><br><b>Endocrine Disruptor Information</b>                        | This product does not contain any known or suspected endocrine disruptors  |
| <b>12.7. Other adverse effects</b><br><b>Persistent Organic Pollutant</b><br><b>Ozone Depletion Potential</b> | This product does not contain any known or suspected substance<br>This product does not contain any known or suspected substance                       |

## SECTION 13: DISPOSAL CONSIDERATIONS

|  |  |
|--|--|
| <b>13.1. Waste treatment methods</b>       |  |
| <b>Waste from Residues/Unused Products</b> | 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. |
| <b>Contaminated Packaging</b>              | Dispose of this container to hazardous or special waste collection point.  |
| <b>European Waste Catalogue (EWC)</b>      | According to the European Waste Catalog, Waste Codes are not product specific, but application specific.   |
| <b>Other Information</b>                   | Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.  |

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO** Not regulated

**14.1. UN number**  
**14.2. UN proper shipping name**  
**14.3. Transport hazard class(es)**  
**14.4. Packing group**

**ADR** Not regulated

**14.1. UN number**  
**14.2. UN proper shipping name**  
**14.3. Transport hazard class(es)**  
**14.4. Packing group**

**IATA** Not regulated

**14.1. UN number**  
**14.2. UN proper shipping name**



# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

## 14.3. Transport hazard class(es)

## 14.4. Packing group

14.5. Environmental hazards No hazards identified

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 |
|------------|----------|-----------|--------|-----|-------|------|----------|------|------|
| Hexadecane | 544-76-3 | 208-878-9 | -      | -   | X     | X    | KE-18435 | X    | X    |

| Component  | CAS No   | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|------------|----------|------|---|-----|------|------|-------|-------|
| Hexadecane | 544-76-3 | X    | ACTIVE  | X   | -    | X    | X     | 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

Not applicable

| 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) |
|------------|----------|---|---|---|
| Hexadecane | 544-76-3 | -   | -   | -   |

#### Seveso III Directive (2012/18/EC)

| Component  | CAS No   | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|------------|----------|---|--|
| Hexadecane | 544-76-3 | 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

ACR12046

# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

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 |
|------------|---------------------------------------|-------------------------|
| Hexadecane | WGK1                                  |                         |

| 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 |
|--------------------------------|--|---|---|
| Hexadecane<br>544-76-3 ( >95 ) | Prohibited and Restricted Substances   |   |   |

## 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

H304 - May be fatal if swallowed and enters airways

EUH066 - Repeated exposure may cause skin dryness or cracking

### 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

**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

**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

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadviser - LOLI, Merck index, RTECS

**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)

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and

# SAFETY DATA SHEET

n-Hexadecane

Revision Date 25-Sep-2023

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.

|                  |                 |
|------------------|-----------------|
| Creation Date    | 13-Sep-2010     |
| Revision Date    | 25-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**