SECTION 1: Identification

1.1 Product identifier

Identification of the substance: n-Hexane

Article number: 7567

Registration number (REACH): 01-2119480412-44-xxxx

Index No: 601-037-00-0

EC number: 203-777-6

CAS number: 110-54-3

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

Identified uses:
- Laboratory chemical
- Laboratory and analytical use

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0
Telefax: +49 (0) 721 - 56 06 149
E-mail: sicherheit@carlroth.de
Website: www.carlroth.de

Competent person responsible for the safety data sheet:

E-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency information service: Poison Centre Munich: +49/(0)89 19240

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.2</td>
<td>skin corrosion/irritation</td>
<td>(Skin Irrit. 2)</td>
<td>H315</td>
</tr>
<tr>
<td>A.7</td>
<td>reproductive toxicity</td>
<td>(Repr. 2)</td>
<td>H361f</td>
</tr>
<tr>
<td>A.8D</td>
<td>specific target organ toxicity - single exposure (narcotic effects, drowsiness)</td>
<td>(STOT SE 3)</td>
<td>H336</td>
</tr>
<tr>
<td>A.9</td>
<td>specific target organ toxicity - repeated exposure</td>
<td>(STOT RE 2)</td>
<td>H373</td>
</tr>
<tr>
<td>A.10</td>
<td>aspiration hazard</td>
<td>(Asp. Tox. 1)</td>
<td>H304</td>
</tr>
</tbody>
</table>
n-Hexane ROTISOLV® ≥96 %, Pestilyse® plus

Classification acc. to GHS

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.6</td>
<td>flammable liquid</td>
<td>(Flam. Liq. 2)</td>
<td>H225</td>
</tr>
</tbody>
</table>

Supplemental hazard information

<table>
<thead>
<tr>
<th>Code</th>
<th>Supplemental hazard information</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNOC002</td>
<td>may be harmful in contact with skin (GHS category 5: acutely toxic - dermal)</td>
</tr>
<tr>
<td>HNOC010</td>
<td>harmful to aquatic life with long lasting effects (GHS category 3: aquatic toxicity - acute and/or chronic)</td>
</tr>
</tbody>
</table>

The most important adverse physicochemical, human health and environmental effects

Narcotic effects.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Signal word

Danger

Pictograms

GHS02, GHS07, GHS08

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
- **H361f**: Suspected of damaging fertility
- **H373**: May cause damage to organs (nervous system) through prolonged or repeated exposure (if inhaled)

Precautionary statements

Precautionary statements - prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/.../equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash ... thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
Wear protective gloves/eye protection/face protection.
Wear protective gloves.
Wear personal protective equipment/face protection.

Precautionary statements - response
If swallowed: Immediately call a poison center/doctor.
If on skin: Wash with plenty of water.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If exposed or concerned: Get medical advice/attention.
Call a poison center/doctor if you feel unwell.
Get medical advice/attention if you feel unwell.
Specific treatment (see ... on this label).
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use carbon dioxide, powder extinguisher or water spray to extinguish.
Collect spillage.

Precautionary statements - storage
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Precautionary statements - disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

For professional users only
Labelling of packages where the contents do not exceed 125 ml
Signal word: Danger

Symbol(s)

H304 May be fatal if swallowed and enters airways.
H361f Suspected of damaging fertility.

Do not handle until all safety precautions have been read and understood.
Wear protective gloves/eye protection/face protection.
Wear protective gloves.
If swallowed: Immediately call a poison center/doctor.
If exposed or concerned: Get medical advice/attention.
Do NOT induce vomiting.
Dispose of contents/container in accordance with local/regional/national/international regulations.

HNOC002 May be harmful in contact with skin (GHS category 5: acutely toxic - dermal).
HNOC010 Harmful to aquatic life with long lasting effects (GHS category 3: aquatic toxicity - acute and/or chronic).

2.3 Other hazards
There is no additional information.
SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>n-Hexane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index No</td>
<td>601-037-00-0</td>
</tr>
<tr>
<td>Registration number (REACH)</td>
<td>01-2119480412-44-xxxx</td>
</tr>
<tr>
<td>EC number</td>
<td>203-777-6</td>
</tr>
<tr>
<td>CAS number</td>
<td>110-54-3</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>( \text{C}<em>6\text{H}</em>{14} )</td>
</tr>
<tr>
<td>Molar mass</td>
<td>86.18 g/mol</td>
</tr>
</tbody>
</table>

SECTION 4: First-aid measures

4.1 Description of first-aid measures

**General notes**
Take off contaminated clothing.

**Following inhalation**
Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

**Following skin contact**
Rinse skin with water/shower. In case of skin irritation, consult a physician.

**Following eye contact**
Rinse cautiously with water for several minutes. Consult an ophthalmologist.

**Following ingestion**
Rinse mouth. Do not induce vomiting. Aspiration hazard. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed
Irritation, Dizziness, Drowsiness, Nausea, Vomiting, Corneal opacity, Narcosis, Aspiration hazard

4.3 Indication of any immediate medical attention and special treatment needed
none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

**Suitable extinguishing media**
Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO2)
Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible. Vapours can form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO2)

5.3 Advice for firefighters

Vapours are heavier than air. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Do not breathe vapor/spray. Avoid contact with skin and eyes. Wear personal protective equipment/face protection. Avoidance of ignition sources.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Explosive properties.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections


SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide adequate ventilation as well as local exhaustion at critical locations. When not in use, keep containers tightly closed.

• Measures to prevent fire as well as aerosol and dust generation

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.
Advice on general occupational hygiene
Wash hands before breaks and after work. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed.

Incompatible substances or mixtures
Observe compatible storage of chemicals.

Consideration of other advice
Ground/bond container and receiving equipment.

• Ventilation requirements
Use local and general ventilation.

• Specific designs for storage rooms or vessels
Recommended storage temperature: 15 – 25 °C.

7.3 Specific end use(s)
No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of agent</th>
<th>CAS No</th>
<th>Notation</th>
<th>Identifier</th>
<th>TWA [ppm]</th>
<th>TWA [mg/m³]</th>
<th>STEL [ppm]</th>
<th>STEL [mg/m³]</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>n-hexane</td>
<td>110-54-3</td>
<td>TLV®</td>
<td></td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td>ACGIH® 2019</td>
</tr>
<tr>
<td>US</td>
<td>n-hexane</td>
<td>110-54-3</td>
<td>PEL</td>
<td></td>
<td>500</td>
<td>1,800</td>
<td></td>
<td></td>
<td>29 CFR 1910.1000</td>
</tr>
</tbody>
</table>

Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Biological limit values

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of agent</th>
<th>Parameter</th>
<th>Notation</th>
<th>Identifier</th>
<th>Value</th>
<th>Material</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>n-hexane</td>
<td>2,5-hexanedione</td>
<td>no_hydr</td>
<td>BEI®</td>
<td>0.5 mg/l</td>
<td>urine</td>
<td>ACGIH® 2019</td>
</tr>
</tbody>
</table>

Notation

no_hydr No hydrolysis
Relevant DNELs/DMELs/PNECs and other threshold levels

- **human health values**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Threshold level</th>
<th>Protection goal, route of exposure</th>
<th>Used in</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL</td>
<td>75 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>11 mg/kg bw/ day</td>
<td>human, dermal</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection.

Skin protection

- **hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 °C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

- **type of material**
  NBR (Nitrile rubber)

- **material thickness**
  ≥0,4 mm

- **breakthrough times of the glove material**
  >480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Flame-retardant protective clothing.

Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Type : A (against organic gases and vapors with a boiling point of > 65 °C , color code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.
### SECTION 9: Physical and chemical properties

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

**Appearance**

- **Physical state**: liquid (fluid)
- **Color**: colorless
- **Odor**: like: Gasoline
- **Odor threshold**: No data available

**Other physical and chemical parameters**

- **pH (value)**: This information is not available.
- **Melting point/freezing point**: -95 °C at 1,013 hPa
- **Initial boiling point and boiling range**: 68 — 69 °C at 1,013 hPa
- **Flash point**: -22 °C at 1,013 hPa
- **Evaporation rate**: no data available
- **Flammability (solid, gas)**: not relevant (fluid)

**Explosive limits**

- **lower explosion limit (LEL)**: 1.1 vol%
- **upper explosion limit (UEL)**: 7.5 vol%

**Explosion limits of dust clouds**: not relevant

**Vapor pressure**: 160 hPa at 20 °C

**Density**: 0.66 g/cm³ at 20 °C

**Vapor density**: 2.79 (air = 1)

**Bulk density**: Not applicable

**Relative density**: Information on this property is not available.

**Solubility(ies)**

- **Water solubility**: <0.1 g/l at 20 °C

**Partition coefficient**

- **n-octanol/water (log KOW)**: 4 (pH value: 7, 20 °C) (ECHA)
- **Soil organic carbon/water (log KOC)**: 3.34 (ECHA)

**Auto-ignition temperature**: 225 °C - ECHA

**Decomposition temperature**: no data available

**Viscosity**

- **kinematic viscosity**: 0.5 mm²/s at 20 °C
- **dynamic viscosity**: 0.33 mPa s at 20 °C

**Explosive properties**: Shall not be classified as explosive

**Oxidizing properties**: none
9.2 Other information

SECTION 10: Stability and reactivity

10.1 Reactivity
Risk of ignition. Vapours can form explosive mixtures with air.

10.2 Chemical stability
The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions
Violent reaction with: Peroxides, Chlorine, Iodine, Strong oxidizer, Nitrogen oxides (NOx), => Explosive properties

10.4 Conditions to avoid
Keep away from heat.

10.5 Incompatible materials
plastic and rubber

10.6 Hazardous decomposition products
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Shall not be classified as acutely toxic.

<table>
<thead>
<tr>
<th>Exposure route</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>inhalation: vapor</td>
<td>LC50</td>
<td>176 mg/l/4h</td>
<td>rat</td>
<td>RTECS</td>
</tr>
<tr>
<td>oral</td>
<td>LD50</td>
<td>25,000 mg/kg</td>
<td>rat</td>
<td>TOXNET</td>
</tr>
<tr>
<td>dermal</td>
<td>LD50</td>
<td>&gt;2,000 mg/kg</td>
<td>rabbit</td>
<td>ECHA</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization
Shall not be classified as a respiratory or skin sensitizer.

Summary of evaluation of the CMR properties

Reproductive toxicity:
Suspected of damaging fertility

- Specific target organ toxicity - single exposure
  May cause drowsiness or dizziness.

- Specific target organ toxicity - repeated exposure
  May cause damage to organs (nervous system) through prolonged or repeated exposure (if inhaled).
**Aspiration hazard**
May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**
- **If swallowed**
  nausea, vomiting, aspiration hazard
- **If in eyes**
  Irritating to eyes, corneal opacity
- **If inhaled**
  Irritation to respiratory tract, fatigue, narcosis
- **If on skin**
  causes skin irritation

**Other information**
None

---

**SECTION 12: Ecological information**

12.1 **Toxicity**
acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

**Aquatic toxicity (acute)**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LL50</td>
<td>12.51 mg/l</td>
<td>fish</td>
<td>ECHA</td>
<td>96 h</td>
</tr>
<tr>
<td>EL50</td>
<td>21.85 mg/l</td>
<td>aquatic invertebrates</td>
<td>ECHA</td>
<td>48 h</td>
</tr>
</tbody>
</table>

12.2 **Process of degradability**
The substance is readily biodegradable.
Theoretical Oxygen Demand: 3.527 mg/mg
Theoretical Carbon Dioxide: 3.064 mg/mg

<table>
<thead>
<tr>
<th>Process</th>
<th>Degradation rate</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>oxygen depletion</td>
<td>83 %</td>
<td>10 d</td>
</tr>
</tbody>
</table>

12.3 **Bioaccumulative potential**
The substance fulfills the very bioaccumulative criterion.
n-octanol/water (log KOW) 4 (pH value: 7, 20 °C)
BCF 501.2 (ECHA)

12.4 **Mobility in soil**
The Organic Carbon normalised adsorption coefficient 3.34

12.5 **Results of PBT and vPvB assessment**
Data are not available.

12.6 **Other adverse effects**
Data are not available.
SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Sewage disposal-relevant information**

Do not empty into drains.

**Waste treatment of containers/packages**

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number

1208

14.2 UN proper shipping name

HEXANES

14.3 Transport hazard class(es)

Class 3 (flammable liquids)

14.4 Packing group

II (substance presenting medium danger)

14.5 Environmental hazards

hazardous to the aquatic environment

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

- Transport of dangerous goods by road or rail (49 CFR US DOT)

  UN number 1208
  Proper shipping name Hexanes
  Class 3
  Packing group II
  Danger label(s) 3 + "Fish and tree"
**n-Hexane ROTISOLV® ≥96 %, Pestilyse® plus**

*article number: 7567*

**Environmental hazards**
- yes (hazardous to the aquatic environment)

**Special provisions (SP)**
- IB2, T4, TP2

**ERG No**
- 128

**International Maritime Dangerous Goods Code (IMDG)**

- **UN number**: 1208
- **Proper shipping name**: HEXANES
- **Particulars in the shipper’s declaration**: UN1208, HEXANES, 3, II, -22°C c.c., MARINE POLLUTANT
- **Class**: 3
- **Marine pollutant**: yes (P) (hazardous to the aquatic environment)
- **Packing group**: II
- **Danger label(s)**: 3 + "fish and tree"

- **Special provisions (SP)**
  - -
- **Excepted quantities (EQ)**
  - E2
- **Limited quantities (LQ)**
  - 1 L
- **EmS**
  - F-E, S-D
- **Stowage category**
  - E

**International Civil Aviation Organization (ICAO-IATA/DGR)**

- **UN number**: 1208
- **Proper shipping name**: Hexanes
- **Particulars in the shipper’s declaration**: UN1208, Hexanes, 3, II
- **Class**: 3
- **Environmental hazards**: yes (hazardous to the aquatic environment)
- **Packing group**: II
- **Danger label(s)**: 3

- **Excepted quantities (EQ)**
  - E2
- **Limited quantities (LQ)**
  - 1 L
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA)
Not listed.

Superfund Amendment and Reauthorization Act (SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)
Not listed.

Specific Toxic Chemical Listings (EPCRA Section 313)

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Wt%</th>
<th>Remarks</th>
<th>Effective date</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>100</td>
<td></td>
<td>1995-01-01</td>
</tr>
</tbody>
</table>

CERCLA

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Wt%</th>
<th>Remarks</th>
<th>Statutory code</th>
<th>RCRA waste No.</th>
<th>Final RQ pounds (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>100</td>
<td></td>
<td>3</td>
<td></td>
<td>5000 (2270)</td>
</tr>
</tbody>
</table>

Legend

3 "3" indicates that the source is section 112 of the Clean Air Act

Clean Air Act
Not listed.

New Jersey Worker and Community Right to Know Act

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Wt%</th>
<th>Remarks</th>
<th>Classifications</th>
<th>Listed in</th>
<th>Substance number</th>
<th>DOT number</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>100</td>
<td></td>
<td>F3</td>
<td>1 2 3 4 6 8 15 17 18 20</td>
<td>1340</td>
<td>1208</td>
</tr>
</tbody>
</table>

Legend
2 "2009 TLVs® and BEIs®, Threshold Limit Values and Biological Exposure Indices," American Conference of Governmental Industrial Hygienists (ACGIH), 2009.
n-Hexane ROTISOLV® ≥96 %, Pestilyse® plus

article number: 7567

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Wt%</th>
<th>Remarks</th>
<th>Type of the toxicity</th>
<th>Remarks</th>
<th>NSRL or MADL (µg/day)</th>
<th>Date listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>100</td>
<td>male</td>
<td></td>
<td></td>
<td>28,000 (oral) 20,000 (inhalation)</td>
<td>2017-12-15</td>
</tr>
</tbody>
</table>

Drug precursors
Not listed.

Industry or sector specific available guidance(s)
NPCA-HMIS® III

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic</td>
<td>*</td>
<td>chronic (long-term) health effects may result from repeated overexposure</td>
</tr>
<tr>
<td>Health</td>
<td>2</td>
<td>temporary or minor injury may occur</td>
</tr>
<tr>
<td>Flammability</td>
<td>3</td>
<td>material that can be ignited under almost all ambient temperature conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

NFPA® 704
n-Hexane ROTISOLV® ≥96 %, Pestilyse® plus

article number: 7567

<table>
<thead>
<tr>
<th>Category</th>
<th>Degree of hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>3</td>
<td>material that can be ignited under almost all ambient temperature conditions</td>
</tr>
<tr>
<td>Health</td>
<td>2</td>
<td>material that, under emergency conditions, can cause temporary incapacitation or residual injury</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
</tbody>
</table>

Special hazard

Flammability: Flammability hazard
Health: Health hazard
Instability: Instability hazard

National inventories

Substance is listed in the following national inventories:

<table>
<thead>
<tr>
<th>Country</th>
<th>National inventories</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU</td>
<td>AICS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CA</td>
<td>DSL</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CN</td>
<td>IECSC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>ECSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>REACH Reg.</td>
<td>substance is listed</td>
</tr>
<tr>
<td>JP</td>
<td>CSCL-ENCS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>KR</td>
<td>KECI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>MX</td>
<td>INSQ</td>
<td>substance is listed</td>
</tr>
<tr>
<td>NZ</td>
<td>NZIoC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>PH</td>
<td>PICCS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TR</td>
<td>CICR</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TW</td>
<td>TCSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>US</td>
<td>TSCA</td>
<td>substance is listed</td>
</tr>
</tbody>
</table>

Legend

AICS    Australian Inventory of Chemical Substances
CICR    Chemical Inventory and Control Regulation
CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS)
DSL     Domestic Substances List (DSL)
ECSI    EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC   Inventory of Existing Chemical Substances Produced or Imported in China
INSC    National Inventory of Chemical Substances
KECI    Korea Existing Chemicals Inventory
NZIoC   New Zealand Inventory of Chemicals
PICCS   Philippine Inventory of Chemicals and Chemical Substances
REACH Reg. REACH registered substances
TCSI    Taiwan Chemical Substance Inventory
TSCA    Toxic Substance Control Act

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.
n-Hexane ROTISOLV® ≥96 %, Pestilyse® plus
article number: 7567

SECTION 16: Other information, including date of preparation or last revision

16.1 Indication of changes (revised safety data sheet)

<table>
<thead>
<tr>
<th>Section</th>
<th>Former entry (text/value)</th>
<th>Actual entry (text/value)</th>
<th>Safety-relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>Pictograms: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>Biological limit values: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>49 CFR US DOT</td>
<td>49 CFR § 40 U.S. Department of Transportation</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>BCF</td>
<td>bioconcentration factor</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)</td>
</tr>
<tr>
<td>CMR</td>
<td>Carcinogenic, Mutagenic or toxic for Reproduction</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>DMEL</td>
<td>Derived Minimal Effect Level</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No-Effect Level</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELS0</td>
<td>Effective Loading 50 %: the ELS0 corresponds to the loading rate required to produce a response in 50% of the test organisms</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>EmS</td>
<td>Emergency Schedule</td>
</tr>
<tr>
<td>ERG No</td>
<td>Emergency Response Guidebook - Number</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
</tbody>
</table>
Abbr. | Descriptions of used abbreviations
---|---
Index No | the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50% lethality during a specified time interval
LD50 | Lethal Dose 50%: the LD50 corresponds to the dose of a tested substance causing 50% lethality during a specified time interval
LL50 | Lethal Loading 50%: the LL50 corresponds to the loading rate causing 50% lethality
MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP | No-Longer Polymer
OSHA | Occupational Safety and Health Administration (United States)
PBET | Persistent, Bioaccumulative and Toxic
PEL | permissible exposure limit
PNEC | Predicted No-Effect Concentration
ppm | parts per million
REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL | short-term exposure limit
TLV® | Threshold Limit Values
TWA | time-weighted average
vPvB | very Persistent and very Bioaccumulative

Key literature references and sources for data
- Transport of dangerous goods by road or rail (49 CFR US DOT)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H225</td>
<td>highly flammable liquid and vapor</td>
</tr>
<tr>
<td>H304</td>
<td>may be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td>H315</td>
<td>causes skin irritation</td>
</tr>
<tr>
<td>H336</td>
<td>may cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H361f</td>
<td>suspected of damaging fertility</td>
</tr>
<tr>
<td>H373</td>
<td>may cause damage to organs (nervous system) through prolonged or repeated exposure (if inhaled)</td>
</tr>
</tbody>
</table>
Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.