

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 02 Jun 2023

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

n-Pentane

### 1.1. Catalog No.:

678650

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

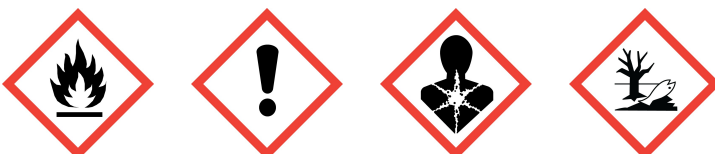
HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
Flammable liquids (Category 2), H225  
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336  
Aspiration hazard (Category 1), H304  
Chronic aquatic toxicity (Category 2), H411 Classification according to EU Directives 67/548/EEC or 1999/45/EC  
F+ Extremely flammable R12  
Xn Harmful R65  
R66  
R67  
N Dangerous for the  
environment  
R51/53

### 2.2. Label elements

#### 2.2.1. Pictogram



## 2.2.2.

### 2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 Pictogram Signal word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing vapours.

P273 Avoid release to the environment.

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

P331 Do NOT induce vomiting.

Supplemental Hazard information (EU)

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Formula : C<sub>5</sub>H<sub>12</sub>

Molecular Weight : 72,15 g/mol

CAS-No. : 109-66-0

EC-No. : 203-692-4

Index-No. : 601-006-00-1

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component Classification Concentration

n-Pentane

CAS-No.

EC-No.

Index-No.

109-66-0

203-692-4

601-006-00-1

Flam. Liq. 2; STOT SE 3; Asp.

Tox. 1; Aquatic Chronic 2;

H225, H304, H336, H411,

EUH066

<= 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component Classification Concentration

n-Pentane

CAS-No.

EC-No.

Index-No.

109-66-0

203-692-4

601-006-00-1

F+, Xn, N, R12 - R51/53 - R65

- R66 - R67

<= 100 %

### 3.1.1. Formula

C<sub>5</sub>H<sub>12</sub>

### 3.1.2. Molecular Weight (g/mol)

72.15

### 3.1.3. CAS-No.

109-66-0

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

no data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers

## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

#### 6.4 Reference to other sections

For disposal see section 13

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands. Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid, clear  
Colour: colourless
- b) Odour no data available
- c) Odour Threshold no data available
- d) pH no data available
- e) Melting point/freezing point  
Melting point/range: -130 °C - lit.
- f) Initial boiling point and boiling range  
35 - 36 °C - lit.
- g) Flash point -49,0 °C - closed cup
- h) Evaporation rate no data available
- i) Flammability (solid, gas) no data available
- j) Upper/lower flammability or explosive limits  
Upper explosion limit: 8,3 %(V)  
Lower explosion limit: 1,4 %(V)
- k) Vapour pressure 579,0 hPa at 20,0 °C  
1.859,7 hPa at 55,0 °C
- l) Vapour density no data available
- m) Relative density 0,626 g/cm<sup>3</sup> at 25 °C
- n) Water solubility no data available
- o) Partition coefficient: noctanol/water  
log Pow: 3,39
- p) Auto-ignition temperature  
260,0 °C
- q) Decomposition temperature  
no data available
- r) Viscosity no data available
- s) Explosive properties Not explosive
- t) Oxidizing properties no data available

### 9.2 Other safety information

no data available

## 10. STABILITY AND REACTIVITY

- 10.1 Reactivity  
no data available
- 10.2 Chemical stability  
Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions  
no data available
- 10.4 Conditions to avoid  
Heat, flames and sparks. Extremes of temperature and direct sunlight.
- 10.5 Incompatible materials  
Strong oxidizing agents
- 10.6 Hazardous decomposition products  
Other decomposition products - no data available  
In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects  
Acute toxicity  
LD50 Oral - mouse - 5.000 mg/kg

LC50 Inhalation - rat - 4 h - 364.000 mg/m<sup>3</sup>  
LD50 Dermal - rabbit - 3.000 mg/kg  
Skin corrosion/irritation  
Skin - rabbit  
Result: No skin irritation  
(OECD Test Guideline 404)  
Serious eye damage/eye irritation  
no data available  
Respiratory or skin sensitisation  
no data available  
Germ cell mutagenicity  
Ames test  
S. typhimurium  
Result: negative  
Carcinogenicity  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
Reproductive toxicity  
no data available  
Specific target organ toxicity - single exposure  
May cause drowsiness or dizziness.  
Specific target organ toxicity - repeated exposure  
no data available  
Aspiration hazard  
May be fatal if swallowed and enters airways.  
Additional Information  
RTECS: RZ9450000  
Contact with eyes can cause: Redness, Blurred vision, Provokes tears., Prolonged or repeated contact with skin may cause: defatting, Dermatitis, Central nervous system depression, Damage to the lungs.  
Stomach - Irregularities - Based on Human Evidence

## 12. ECOLOGICAL INFORMATION

12.1 Toxicity  
Toxicity to daphnia and other aquatic invertebrates  
EC50 - Daphnia magna (Water flea) - 9,74 mg/l - 48 h  
12.2 Persistence and degradability  
Biodegradability Biotic/Aerobic - Exposure time 192 h  
Result: 70 % - Readily biodegradable.  
12.3 Bioaccumulative potential no data available  
12.4 Mobility in soil  
no data available  
12.5 Results of PBT and vPvB assessment  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted  
12.6 Other adverse effects  
Toxic to aquatic life with long lasting effects.  
Avoid release to the environment. Do not empty into drains.

## 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods  
Product  
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.  
Contaminated packaging  
Dispose of as unused product

#### 14. TRANSPORT INFORMATION

14.1 UN number  
ADR/RID: 1265 IMDG: 1265 IATA: 1265  
14.2 UN proper shipping name  
ADR/RID: PENTANES  
IMDG: PENTANES  
IATA: Pentanes  
14.3 Transport hazard class(es)  
ADR/RID: 3 IMDG: 3 IATA: 3  
14.4 Packaging group  
ADR/RID: II IMDG: II IATA: II  
14.5 Environmental hazards  
ADR/RID: yes IMDG Marine pollutant: yes IATA: no  
14.6 Special precautions for user  
no data available

#### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.  
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
no data available  
15.2 Chemical Safety Assessment  
For this product a chemical safety assessment was not carried out

#### 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.  
The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!