

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

n-Heptane-d16

1.1. Catalog No.:

1107

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

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Germany

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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Flammable liquids (Category 2), H225 Skin irritation (Category 2), H315 Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336 Aspiration hazard (Category 1), H304 Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 1), H410

2.2. Label elements

2.2.1. Pictogram



2.2.2.

Labelling according Regulation (EC) No 1272/2008

Signal word Danger

Hazard statement(s) 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 statement(s) P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 Avoid release to the environment. P301 + P310 + P331 IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. P302 + P352 IF ON SKIN: Wash with plenty of water.

Supplemental Hazard Statements none 2.3 Other hazards This substance/mixture contains no components considered to

be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component: n-heptane-d16
Classification: Flam. Liq. 2; Skin Irrit. 2; STOT SE 3; Asp. Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H225, H315, H336, H304, H400, H410 M-Factor - Aquatic Acute: 10
Concentration: <= 100 %

3.1.1. Formula

C7D16

3.1.2. Molecular Weight (g/mol)

116.30

3.1.3. CAS-No.

33838-52-7

4. FIRST AID MEASURES

4.1 Description of first-aid measures General advice Consult a physician. Show this material 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 Dry powder Dry sand Unsuitable extinguishing media Do NOT use water jet. 5.2 Special hazards arising from the substance or mixture Carbon oxides 5.3 Advice for firefighters Wear self-contained breathing apparatus for firefighting 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 vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors 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 non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national 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 vapor 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 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 in cool place. Store under inert gas. hygroscopic 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 Ingredients 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 gloves 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.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

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 fullface respirator with multi-purpose combination (US) or type ABEK (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 b) Odor No data available c) Odor Threshold No data available d) pH No data available e) Melting point/freezing point Melting point/range: -91 °C - lit. f) Initial boiling point and boiling range 98 °C - lit. g) Flash point -4,00 °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: 7,00 %(V) Lower explosion limit: 1,10 %(V) k) Vapor pressure 111 hPa at 37,70 °C 53 hPa at 20,00 °C l) Vapor density No data available m) Relative density 0,794 g/mL at 25 °C 0,794 g/cm³ at 25 °C n) Water solubility No data available o) Partition coefficient: n-octanol/water log Pow: > 3,000 p) Autoignition temperature No data available q) Decomposition temperature No data available r) Viscosity No data available s) Explosive properties No data available 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. 10.5 Incompatible materials Strong oxidizing agents 10.6 Hazardous decomposition products No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects Acute toxicity Inhalation: Irritating to respiratory system. LC50 Inhalation - Rat - 4,00 h - 103.000 mg/m³ LD50 Intravenous - Mouse - 222 mg/kg Skin corrosion/irritation No data available Serious eye damage/eye irritation No data available Respiratory or skin sensitization No data available Germ cell mutagenicity No data available Carcinogenicity IARC: No ingredient 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 The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard. Additional Information RTECS: Not available

Prolonged or repeated exposure to skin causes defatting and dermatitis., Exposure to large amounts can cause:, narcosis

12. ECOLOGICAL INFORMATION

12.1 Toxicity 12.2 Persistence and degradability 12.3 Bioaccumulative potential No data available 12.4 Mobility in soil No data available 12.5 Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. 12.6 Other adverse effects Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. Contaminated packaging Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number ADR/RID: 1206 IMDG: 1206 IATA: 1206 14.2 UN proper shipping name ADR/RID: HEPTANES IMDG: HEPTANES IATA: Heptanes 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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) :

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!