

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

### 1.1 Product identifiers

Product name: **n-HEPTANE**

CAS-No.: **142-82-5**

Product Number: **A68068**

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

Identified uses: Laboratory chemicals, Manufacture of substances

### 1.3 Details of the supplier of the safety data sheet

Company : Philip Harris Ltd., 2 Gregory Street, Hyde, Cheshire, SK14 4HR,

UNITED KINGDOM

Telephone: +44 (0)845 1200 506 Fax: +44 (0)161 367 2140

Email: enquiries@philipharris.co.uk

### 1.4 Emergency telephone number

Emergency Phone #: **+44 (0)845 1200 506**

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**According to Regulation (EC) No1272/2008;** Flammable liquids (Category 2), Aspiration hazard (Category 1), Skin irritation (Category 2), Specific target organ toxicity - single exposure (Category 3), Acute aquatic toxicity (Category 1), Chronic aquatic toxicity (Category 1)

**According to European Directive 67/548/EEC as amended:** Highly flammable. Irritating to skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed. Vapours may cause drowsiness and dizziness.

### 2.2 Label elements



Pictogram

Signal word

Danger

**Hazard statement(s):** H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H304 May be fatal if swallowed and enters airways. H336 May cause drowsiness or dizziness. H410 Very 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 dust/ fume/ gas/ mist/ vapours/ spray. P273 Avoid release to the

environment. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331 Do NOT induce vomiting. P501 Dispose of contents/ container to an approved waste disposal plant.

**According to European Directive 67/548/EEC as amended.**

Hazard symbol(s)



**R-phrases(s):** R11 Highly flammable. R38 Irritating to skin. R65 Harmful: may cause lung damage if swallowed. R67 Vapours may cause drowsiness and dizziness. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S-phrases(s):** S9 Keep container in a well-ventilated place. S16 Keep away from sources of ignition - No smoking. S29 Do not empty into drains. S33 Take precautionary measures against static discharges. S60 This material and its container must be disposed of as hazardous waste. S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets. S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

**2.3 Other hazards** – no data available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

##### Heptane

Formula:	$\text{CH}_3(\text{CH}_2)_5\text{CH}_3$
Molecular Weight:	100.21g/mol
CAS-No.:	142-82-5
EC-No.:	205-563-8
Index-No.:	601-008-00-2

### 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.

**In case of skin contact:** Wash off with soap and plenty of water.

**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.

**4.2 Most important symptoms and effects, both acute and delayed:** Prolonged or repeated exposure to skin causes defatting and dermatitis., Central nervous system depression, narcosis, Damage to the lungs.

**4.3 Indication of immediate medical attention and special treatment needed:** no data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable extinguishing media:** For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

**5.2 Special hazards arising from the substance or mixture:** Carbon oxides

**5.3 Precautions for fire-fighters:** Wear self contained breathing apparatus for fire fighting if necessary.

**5.4 Further information:** In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. 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.

**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.

**7.2 Conditions for safe storage, including any incompatibilities:** Store under inert gas. 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.

**7.3 Specific end uses:** no data available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters				
Component	CAS No.	Value	Control Parameters	Update
Heptane	142-82-5	TWA	500ppm	-
Heptane	142-82-5	TWA	500ppm 2085mg/m <sup>3</sup>	2000/39/EC

UK. EH40 WEL – Workplace Exposure Limits. Remarks Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

**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. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC 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 full-face 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).

9. PHYSICAL AND CHEMICAL PROPERTIES		
9.1 Information on basic physical and chemical properties		
a) Appearance:	<b>Form:</b> Liquid	<b>Colour:</b> no data available
b) Odour:	no data available	
c) Odour Threshold:	no data available	
d) pH:	no data available	
e) Melting/freezing point:	91.0 °C	Melting point/range: no data available
f) Initial boiling point and boiling range:	98.0 - 99.0 °C	
g) Flash point:	4.0 °C - closed cup	
h) Evaporation rate:	no data available	
i) Flammability (solid, gas):	no data available	
j) Upper/lower flammability or explosive limits:	1-7.7%(V)	
k) Vapour pressure:	110.7 hPa at 37.7 °C, 53.3 hPa at 20.0 °C	

- l) Vapour density: no data available  
m) Relative density: 0.68 g/cm<sup>3</sup>  
n) Water solubility: Insoluble  
o) Partition coefficient: n-octanol/water: > 3.000log Pow: 5  
p) Autoignition temperature: 223.0 °C  
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:** no data available

**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

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity:** LC50 Inhalation - rat - 4 h - 103,000 mg/m<sup>3</sup>

Inhalation: Irritating to respiratory system.

**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:** This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. 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.

### Potential health effects

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.

**Ingestion** May be harmful if swallowed. Aspiration hazard if swallowed - can enter

lungs and cause damage.

**Skin** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes** May cause eye irritation.

**Signs and Symptoms of Exposure:** Prolonged or repeated exposure to skin causes defatting and dermatitis., Central nervous system depression, narcosis, Damage to the lungs.

**Additional Information:** RTECS: MI7700000

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity:** Toxicity to fish LC50 - *Carassius auratus* (goldfish) - 4 mg/L - 24.0 h

LC50 - *Tilapia mossambica* - 375 mg/L - 96.0 h

Toxicity to daphnia and other aquatic invertebrates.

EC50 - *Daphnia magna* (Water flea) - 1.50 mg/L - 48 h

**12.2 Persistence and degradability:** no data available

**12.3 Bioaccumulative potential:** Indication of bioaccumulation.

**12.4 Mobility in soil:** no data available

**12.5 Results of PBT and vPvB assessment:** no data available

**12.6 Other adverse effects:** Very toxic to aquatic life. Do not empty into drains. Avoid release to the environment.

## 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. Contact a licensed professional waste disposal service to dispose of this material.

**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: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for users: 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: no data available

#### 16. OTHER INFORMATION

no data available