

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

### 1.1 Product identifiers

Product name: **Naphthalene**

CAS-No.: **91-20-3**

Product Number: **F77881**

### 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;** Carcinogenicity (Category 2), Acute toxicity (Category 4), Acute aquatic toxicity (Category 1), Chronic aquatic toxicity (Category 1)

**According to European Directive 67/548/EEC as amended:** Limited evidence of a carcinogenic effect. Harmful if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 2.2 Label elements

Pictogram



Signal word

Warning

**Hazard statement(s):** H302 Harmful if swallowed. H351 Suspected of causing cancer.

H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statement(s):** P273 Avoid release to the environment. P281 Use personal protective equipment as required. 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):** R22 Harmful if swallowed. R40 Limited evidence of a carcinogenic effect. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S-phrases(s):** S36/37 Wear suitable protective clothing and gloves. S46 If swallowed, seek medical advice immediately and show this container or label. 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.

**2.3 Other hazards** – no data available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

##### Naphthalene

Formula:	$C_{10}H_8$
Molecular Weight:	128.17
CAS-No.:	91-20-3
EC-No.:	202-049-5
Index-No.:	601-052-00-2

### 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. Take victim immediately to hospital.

**In case of eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes.

**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:** Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Naphthalene is retinotoxic and systemic absorption of its vapours above 15ppm, may result in:, cataracts, optic neuritis, corneal injury, Eye irritation, Ingestion may provoke the following symptoms:, hemolytic anaemia, hemoglobinuria, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Convulsions, anaemia, Kidney injury may occur., Seizures., Coma.

**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:** 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 Precautions for fire-fighters:** 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:** Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust.

**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:** Sweep up and shovel. 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). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a 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 formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. 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 in cool place. Keep container tightly closed in a dry and well-ventilated place.

**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
Naphthalene	91-20-3	TWA	10ppm 50mg/m <sup>3</sup>	Europe

Commission Directive 91/322/EEC on establishing indicative limit values Remarks Indicative

### 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 particle respirator type N100 (US) or type P3 (EN 143) 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> Solid                     | <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:                       | 79.5 - 81.0 °C                         | Melting point/range: no data available |
| f) Initial boiling point and boiling range:      | 218 °C                                 |  |
| g) Flash point:                                  | 80.0 °C - closed cup                   |  |
| h) Evaporation rate:                             | no data available                      |  |
| i) Flammability (solid, gas):                    | no data available                      |  |
| j) Upper/lower flammability or explosive limits: | 0.9-5.9% (V)                           |  |
| k) Vapour pressure:                              | 1.3 hPa at 53.0 °C 0.04 hPa at 25.0 °C |  |
| l) Vapour density:                               | no data available                      |  |
| m) Relative density:                             | no data available                      |  |
| n) Water solubility:                             | no data available                      |  |
| o) Partition coefficient: n-octanol/water:       | 3.30                                   |  |
| p) Autoignition temperature:                     | 526.0 °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:** Surface tension 31.8 mN/m at 100.0 °C

## 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:** LD50 Oral - rat - 490.0 mg/kg

LC50 Inhalation - rat - 1 h - > 340 mg/m<sup>3</sup>. Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation. Behavioural: Somnolence (general depressed activity).

LD50 Dermal - rabbit - 20,000 mg/kg

**Skin corrosion/irritation:** no data available

**Serious eye damage/eye irritation:** Eyes - rabbit - Mild eye irritation

**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** no data available

**Carcinogenicity:** This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification. Limited evidence of carcinogenicity in animal studies. IARC: 2B - Group 2B: Possibly carcinogenic to humans (Naphthalene). 2B - Group 2B: Possibly carcinogenic to humans (Naphthalene)

**Reproductive toxicity:** no data available

**Specific target organ toxicity - single exposure:** no data available

**Specific target organ toxicity - repeated exposure:** no data available

**Aspiration hazard:** no data available

### Potential health effects

**Inhalation** May be fatal if inhaled. Causes respiratory tract irritation.

**Ingestion** Harmful if swallowed.

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

**Eyes** Causes eye irritation.

**Signs and Symptoms of Exposure:** Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Naphthalene is retinotoxic and systemic absorption of its vapors above 15ppm, may result in:, cataracts, optic neuritis, corneal injury, Eye irritation, Ingestion may provoke the following symptoms:, hemolytic anaemia, hemoglobinuria, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Convulsions, anaemia, Kidney injury may occur., Seizures., Coma.

**Additional Information:** RTECS: QJ0525000

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity:** Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0.9 - 9.8 mg/l - 96.0 h

LC50 - *Pimephales promelas* (fathead minnow) - 1 - 6.5 mg/l - 96.0 h

NOEC - other fish - 1.8 mg/l - 3.0 d

LOEC - other fish - 3.2 mg/l - 3.0 d

Toxicity to daphnia and other aquatic invertebrates.

EC50 - *Daphnia magna* (Water flea) - 1.00 - 3.40 mg/l - 48 h

Toxicity to algae EC50 - No information available. - 33.00 mg/l - 24 h

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

**12.3 Bioaccumulative potential:** Bioaccumulation Fish -

Bioconcentration factor (BCF): 427 - 1,158

**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 with long lasting effects.

### 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: 1334 IMDG: 1334 IATA: 1334

#### 14.2 UN proper shipping name

ADR/RID: NAPHTHALENE, REFINED

IMDG: NAPHTHALENE, REFINED

IATA: NAPHTHALENE, REFINED

#### 14.3 Transport hazard class(es)

ADR/RID: 4.1 IMDG: 4.1 IATA: 4.1

#### 14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

#### 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.

### 16. OTHER INFORMATION

no data available