

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifiers**Product name: **ZINC POWDER**CAS-No.: **7440-66-6**Product Number: **L77604****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;** Substances, which in contact with water, emit flammable gases (Category 1), Pyrophoric solids (Category 1), Acute aquatic toxicity (Category 1), Chronic aquatic toxicity (Category 1)

**According to European Directive 67/548/EEC as amended:** Contact with water liberates extremely flammable gases. Spontaneously flammable in air. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2 Label elements**

Pictogram



Signal word

Danger

**Hazard statement(s):** H250 Catches fire spontaneously if exposed to air. H260 In contact with water releases flammable gases which may ignite spontaneously. H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statement(s):** P222 Do not allow contact with air. P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire. P231 + P232 Handle under inert gas. Protect from moisture. P273 Avoid release to the environment. P370 + P378 In case of fire:

Use dry sand, dry chemical or alcohol-resistant foam for extinction. P422 Store contents under inert gas.



**Hazard symbol(s):**

**R-phrase(s):** R15 Contact with water liberates extremely flammable gases. R17 Spontaneously flammable in air. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S-phrase(s):** S43 In case of fire, use fire-fighting equipment on basis class D. 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

##### Zinc powder (pyrophoric)

Formula:	Zn
Molecular Weight:	65.39
CAS-No.:	7440-66-6
EC-No.:	231-175-3
Index-No.:	030-001-00-1

### 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:** Never give anything by mouth to an unconscious person. Rinse mouth with water.

**4.2 Most important symptoms and effects, both acute and delayed:** no data available

**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:** Carbon dioxide (CO<sub>2</sub>) Dry powder

**5.2 Special hazards arising from the substance or mixture:** no data available

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

**5.4 Further information:** Extinguishing media which shall not be used for safety reasons: Water

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:** Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe 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:** 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). Do not flush with water. 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:** Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.

**7.2 Conditions for safe storage, including any incompatibilities:** Keep container tightly closed in a dry and well-ventilated place. Store in cool place. Never allow product to get in contact with water during storage.

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters:** Contains no substances with occupational exposure limit values.

### 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:** Flame retardant 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:               **Form:** Powder               **Colour:** Grey
- b) Odour:                                 no data available
- c) Odour Threshold:                 no data available
- d) pH:                                      no data available
- e) Melting/freezing point:        420 °C                Melting point/range: no data available
- f) Initial boiling point and boiling range: 907 °C
- g) Flash point:                         no data available
- h) Evaporation rate:                 no data available
- i) Flammability (solid, gas):       no data available
- j) Upper/lower flammability or explosive limits: no data available
- k) Vapour pressure:                 1 hPa at 487 °C
- l) Vapour density:                    no data available
- m) Relative density:                7.133 g/mL at 25 °C
- n) Water solubility:                 no data available
- o) Partition coefficient: n-octanol/water: 5
- 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:** Reacts violently with water.

**10.4 Conditions to avoid:** Exposure to moisture.

**10.5 Incompatible materials:** Strong acids and oxidizing agents

**10.6 Hazardous decomposition products:** formed under fire conditions. - Zinc/zinc oxides

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity:** no data available

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

**Serious eye damage/eye irritation:** no data available

**Respiratory or skin sensitization:** Did not cause sensitization on laboratory animals.

**Germ cell mutagenicity:** no data available

**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:** no data available

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

**Aspiration hazard:** no data available

#### **Potential health effects**

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion** May be harmful if swallowed.

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

**Eyes** May cause eye irritation.

**Signs and Symptoms of Exposure:** chills, dry throat, sweet taste, Fever, Cough, Nausea, Vomiting, Weakness

**Additional Information:** RTECS: ZG8600000

## **12. ECOLOGICAL INFORMATION**

**12.1 Toxicity:** Toxicity to fish LC50 - *Cyprinus carpio* (Carp) - 450.0 µg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates.

LC50 - *Daphnia magna* (Water flea) - 0.068 mg/l - 48 h

mortality NOEC - *Daphnia* - 0.101 - 0.14 mg/l - 7 d

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

**12.3 Bioaccumulative potential:** Bioaccumulation Algae - 7 d at 16 °C

Bioconcentration factor (BCF): 466

**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.

## **13. DISPOSAL CONSIDERATIONS**

### **13.1 Waste treatment methods**

**Product:** Contact a licensed professional waste disposal service to dispose of this material. 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: 1436 IMDG: 1436 IATA: 1436

### 14.2 UN proper shipping name

ADR/RID: ZINC POWDER

IMDG: ZINC POWDER

IATA: ZINC POWDER

### 14.3 Transport hazard class(es)

ADR/RID: 4.3 (4.2) IMDG: 4.3 (4.2) IATA: 4.3 (4.2)

### 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: EMS-No: F-G, S-O

## 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

Aquatic Acute Acute aquatic toxicity

Aquatic Chronic Chronic aquatic toxicity

H250 Catches fire spontaneously if exposed to air.

H260 In contact with water releases flammable gases which may ignite spontaneously.

H410 Very toxic to aquatic life with long lasting effects.

Pyrophoric solid Pyrophoric solids

Water-react Substances, which in contact with water, emit flammable gases

F Highly flammable

N Dangerous for the environment

R15 Contact with water liberates extremely flammable gases.

R17 Spontaneously flammable in air.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.