

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifiers**Product name: **LEAD (II) NITRATE**CAS-No.: **10099-74-8**Product Number: **A68755****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

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**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 solids (Category 1); Acute aquatic toxicity (Category 1); Chronic aquatic toxicity (Category 1)**According to European Directive 67/548/EEC as amended:** Highly flammable.**2.2 Label elements**Signal word **Danger****Hazard statement(s):** H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H332 Harmful if inhaled. H361 Suspected of damaging fertility or the unborn child. H400 Very toxic to aquatic life.**Precautionary statement(s):** P220 Keep/Store away from clothing/ combustible materials. P273 Avoid release to the environment. P281 Use personal protective equipment as required.**Hazard symbol(s):** O Oxidising T Toxic N Dangerous for the environment**R-phrase(s):** R61 May cause harm to the unborn child. R20/22 Also harmful by inhalation and if swallowed. R8 Contact with combustible material may cause fire. R33 Danger of cumulative effects.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62 Possible risk of impaired fertility.

**S-phrases(s):** S53 Avoid exposure - obtain special instructions before use. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). 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. Restricted to professional users.

**2.3 Other hazards** – no data available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

##### Lead nitrate

Formula:	<b>Pb(NO<sub>3</sub>)<sub>2</sub></b>
Molecular Weight:	<b>331.21g/mol</b>
CAS-No.:	<b>10099-74-8</b>
EC-No.:	<b>233-245-9</b>
Index-No.:	<b>082-001-00-6</b>

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

**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:** 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 dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. 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.

**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. Keep away from heat and sources of ignition. Normal measures for preventive fire protection.

**7.2 Conditions for safe storage, including any incompatibilities:** Keep container tightly closed in a dry and well-ventilated place. Store in cool 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
Lead nitrate	10099-74-8	TWA	0.15mg/m <sup>3</sup>	1998-05-01

Europe Chemical Agents Directive - Annex I: Binding occupational exposure limit values. Remarks Binding

#### Biological occupational exposure limit values

Component	CAS No.	Parameter	Value	Specimen
Lead nitrate	10099-74-8	LEAD	0.7mg/l	1998-05-01

Biological monitoring must include measuring the blood-lead level (PbB) using absorption spectrometry or a method giving equivalent results. The binding biological limit value is: 70µg Pb/100 ml blood. Medical surveillance is carried out if:- exposure to a concentration of lead in air is greater than 0,075 mg/m<sup>3</sup>, calculated as a time-weighted average over 40 hours per week, or- a blood-lead level greater than 40µg Pb/100 ml blood is measured in individual workers.

### 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:** Safety glasses with side-shields conforming to EN166 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, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. 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 / Crystal | <b>Colour:</b> White                   |
| b) Odour:  | no data available            |  |
| c) Odour Threshold:                              | no data available            |  |
| d) pH:   | no data available            |  |
| e) Melting/freezing point:                       | 470 °C                       | Melting point/range: no data available |
| f) Initial boiling point and boiling range:      | no data available            |  |
| 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:                              | no data available            |  |
| l) Vapour density:                               | no data available            |  |
| m) Relative density:                             | 4.53 g/cm <sup>3</sup>       |  |
| n) Water solubility:                             | 500 g/l                      |  |
| o) Partition coefficient: n-octanol/water:       | no data available            |  |
| 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:** Solubility 0.4 g/l Ethanol, 13.3 g/l Methanol

## 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:** no data available

**10.5 Incompatible materials:** Strong reducing agents, Organic materials, Powdered metals

**10.6 Hazardous decomposition products:** Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO<sub>x</sub>), Lead oxides

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity:** LD50 Intravenous - rat - 93 mg/kg

LD50 Intraperitoneal - mouse - 74 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: 2B - Group 2B: Possibly carcinogenic to humans Re-evaluation of inorganic lead compounds, IARC Monograph (Vol. 87) (February 2004) (Lead nitrate). 2A - Group 2A: Probably carcinogenic to humans (Lead nitrate).

IARC: 2B - Group 2B: Possibly carcinogenic to humans Re-evaluation of inorganic lead compounds, IARC Monograph (Vol. 87) (February 2004) (Lead nitrate). 2A - Group 2A: Probably carcinogenic to humans (Lead nitrate)

**Reproductive toxicity:** Suspected human reproductive toxicant

Developmental Toxicity - rat

Specific Developmental Abnormalities: Central nervous system.

**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** Harmful if inhaled. May cause respiratory tract irritation.

**Ingestion** 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:** Lead salts have been reported to cross the placenta and to induce embryo- and feto- mortality.

**Additional Information:** RTECS: OG2100000

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity:** Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - 1.5 mg/l - 96.0 h

LC50 - *Cyprinus carpio* (Carp) - 0.4 - 1.3 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates.

EC50 - *Daphnia magna* (Water flea) - 0.5 - 2.0 mg/l - 48 h

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

**12.3 Bioaccumulative potential:** no data available

**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. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic 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: 1469 IMDG: 1469 IATA: 1469

### 14.2 UN proper shipping name

ADR/RID: LEAD NITRATE

IMDG: LEAD NITRATE

IATA: LEAD NITRATE

### 14.3 Transport hazard class(es)

ADR/RID: 5.1 (6.1) IMDG: 5.1 (6.1) IATA: 5.1 (6.1)

### 14.4 Packaging group

ADR/RID: II IMDG: II IATA: II

### 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: YES IATA: no

**14.6 Special precautions for users:** EMS-No: F-A, S-Q

## 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

Acute Tox. Acute toxicity

Aquatic Acute Acute aquatic toxicity

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H361 Suspected of damaging fertility or the unborn child.

H400 Very toxic to aquatic life.

Ox. Sol. Oxidizing solids

Repr. Reproductive toxicity

N Dangerous for the environment

O Oxidising

T Toxic

R 8 Contact with combustible material may cause fire.

R20/22 Harmful by inhalation and if swallowed.

R33 Danger of cumulative effects.

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

R61 May cause harm to the unborn child.

R62 Possible risk of impaired fertility.

Repr.Cat.1 Toxic to Reproduction Category 1

Repr.Cat.3 Toxic to Reproduction Category 3