

## 1. PRODUCT IDENTIFICATION

|                                  |  |
|----------------------------------|--|
| <b>Product Name</b>              | LEAD OXIDE   |
| <b>Other Names</b>               | PbO, lead oxide (PbO), lead containing, lead monoxide, Litharge                        |
| <b>Use</b>                       | Lead oxide – a raw material for the production of “lead paste” for battery manufacture |
| <b>Supplier Name and Address</b> | Century Yuasa Batteries<br>37-65 Cobalt St<br>Carole Park<br>QLD 4300                  |
| <b>Telephone</b>                 | (07) 3361 6161   |
| <b>Emergency (24 Hours)</b>      | (07) 3361 6707   |
| <b>Relevant identified uses</b>  | Raw material for inorganic and organic lead salt manufacture, e.g. battery oxides,     |

## 2. HAZARD(S) IDENTIFICATION

**HAZARDOUS CHEMICAL DANGEROUS GOODS. According to the Model WHS Regulations and the ADG Code.**

**Poisons Schedule** S6 Classified as S6:- Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Signal Word** **DANGER**

**GHS Classification** Acute Toxicity (Oral) Category 4, Acute Toxicity (Inhalation) Category 4, Reproductive Toxicity Category 1B, STOT - RE Category 2, Acute Aquatic Hazard Category 1, Chronic Aquatic Hazard Category 1

**GHS Label Elements**



Harmful



Health Hazard



Environment

|                          |      |  |      |   |
|--------------------------|------|--|------|---|
| <b>Hazard Statements</b> | H302 | Harmful if swallowed                     | H373 | May cause damage to organs through prolonged or repeated exposure |
|                          | H332 | Harmful if inhaled                       | H400 | Very toxic to aquatic life  |
|                          | H360 | May damage fertility or the unborn child | H410 | Very toxic to aquatic life with long lasting effects              |

**Precautionary Statements**

Prevention

Response

|      |   |                 |  |
|------|---|-----------------|--|
| P101 | If medical advice is needed, have product container or label at hand.           | P308+P313       | IF EXPOSED: or concerned:<br>Get medical advice / attention.   |
| P102 | Keep out of reach of children   | P314            | Get medical advice / attention if you feel unwell.   |
| P103 | Read label before use.  | P301+P312       | IF SWALLOWED: Call a POISON CENTER / doctor / physician / first aider / if you feel unwell.                    |
| P201 | Obtain special instructions before use.   | P304+P340       | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                     |
| P260 | Do not breathe dust / fume / gas / mist / vapours / spray.                      | P391            | Collect spillage.  |
| P270 | Do not eat, drink or smoke when using this product.                             | <u>Storage</u>  |  |
| P271 | Use only outdoors or in a well-ventilated area.                                 | P405            | Store locked up.   |
| P273 | Avoid release to the environment  | <u>Disposal</u> |  |
| P280 | Wear protective gloves / protective clothing / eye protection / face protection | P501            | Dispose of contents, container to authorised chemical landfill or if organic, to high temperature incineration |

### 3. COMPOSITION, INFORMATION ON INGREDIENTS

| Ingredient                     | Identification | Content % weight |
|--------------------------------|----------------|------------------|
| Lead Monoxide (PbO)            | CAS 1317-36-8  | 85%              |
| Lead Oxide (PbO <sub>2</sub> ) | CAS 1309-60-0  | 15%              |

### 4. FIRST AID MEASURES

#### DESCRIPTION OF FIRST AID MEASURES

- Eye contact** If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
  - Seek medical attention without delay; if pain persists or recurs seek medical attention.
  - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
- Skin contact** If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
  - Flush skin and hair with running water (and soap if available).
  - Seek medical attention in event of irritation.
- Inhalation** If fumes or combustion products are inhaled:
- Remove from contaminated area.
  - Lay patient down. Keep warm and rested.
  - Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
  - Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
  - Transport to hospital, or doctor.
- Ingestion**
- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
  - For advice, contact a Poisons Information Centre or a doctor.
  - Urgent hospital treatment is likely to be needed.
  - In the meantime, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.
  - If the services of a medical officer or medical doctor are readily available, the patient should be placed in his / her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist.
  - If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.
  - Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:
  - INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
  - NOTE: Wear a protective glove when inducing vomiting by mechanical means.

#### MEDICAL ATTENTION AND SPECIAL TREATMENT. Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.**
- Gastric acids solubilise lead and its salts and lead absorption occurs in the small bowel.
  - Particles of less than 1 um diameter are substantially absorbed by the alveoli following inhalation.
  - Lead is distributed to the red blood cells and has a half-life of 35 days. It is subsequently redistributed to soft tissue & bone-stores or eliminated. The kidney accounts for 75% of daily lead loss; integumentary and alimentary losses account for the remainder.
  - Neurasthenic symptoms are the most common symptoms of intoxication. Lead toxicity produces a classic motor neuropathy. Acute encephalopathy appears infrequently in adults. Diazepam is the best drug for seizures.
  - Whole-blood lead is the best measure of recent exposure; free erythrocyte protoporphyrin (FEP) provides the best screening for chronic exposure. Obvious clinical symptoms occur in adults when whole-blood lead exceeds 80 ug / dL.
  - British anti-lewisite is an effective antidote and enhances faecal and urinary excretion of lead. The onset of action of BAL is about 30 minutes and most of the chelated metal complex is excreted in 4-6 hours, primarily in the bile. Adverse reaction appears in up to 50% of patients given BAL in doses exceeding 5 mg / kg. CaNa<sub>2</sub>EDTA has also been used alone or in concert with BAL as an antidote. D-penicillamine is the usual oral agent for mobilisation of bone lead; its use in the treatment of lead poisoning remains investigational. 2,3-dimercapto-1-propanesulphonic acid (DMPS) and dimercaptosuccinic acid (DMSA) are water soluble analogues of BAL and their effectiveness is undergoing review. As a rule, stop BAL if lead decreases below 50 ug / dL; stop; CaNa<sub>2</sub>EDTA if blood lead decreases below 40 ug / dL or urinary lead drops below 2 mg / 24hrs.

## 5. FIRE FIGHTING MEASURES

### Recommended Extinguishing Media



Water spray or fog.



Foam



Dry chemical powder.



Carbon dioxide.



BCF\ Vaporising Liquid  
(Where regulations permit).



### Extinguishing Media Incompatibilities

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

### Specific Hazards Hazardous Decomposition

- Non-combustible.
- Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of metal oxides, which may emit poisonous fumes

### Fire Incompatibility

- None known.

### Fire Fighting, Special Protective Equipment & Precautions

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions

- Avoid contact with skin and eyes.

### Environmental Precautions

- Prevent, by any means available, spillage from entering drains or water course.

### Methods and materials for containment and cleaning up

- With a clean shovel, transfer spilled material into clean-labelled containers for disposal.
- Prevent from entering drains, sewers, streams or other bodies of water. If contamination of sewers or waterways has occurred, advise the local emergency services

### Protective Equipment

- Personal Protective Equipment advice is contained in Section 8 of the SDS.

### Emergency Procedures Minor Spills

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Use dry clean up procedures and avoid generating dust.
- Place in a suitable, labelled container for waste disposal.

### Major Spills

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Stop leak if safe to do so.
- Contain or absorb spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean-up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services, other related regulatory authorities such as environmental protection and local council.

## 7. HANDLING AND STORAGE

### Safe Handling

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- DO NOT allow material to contact humans, exposed food or food utensils.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.

- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
- Storage**
- Store in original containers.
  - Keep containers securely sealed.
  - Store in a cool, dry, well-ventilated area.
  - Store away from incompatible materials and foodstuff containers.
  - Protect containers against physical damage and check regularly for leaks.
- Suitable container**
- Packing of Lead oxide product in light weight metal or plastic packages may result in container collapse with product release
  - Lined metal can, lined metal pail / can.
  - Plastic pail.
  - Poly-lined drum.
  - Check all containers are clearly labelled and free from leaks.
  - For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.):
  - Removable head packaging;
- Storage incompatibility**
- Is incompatible with aluminium carbide, barium sulphide, silicon, sulphuryl chloride, hydrogen peroxide, chemical active metals, aluminium, combustible materials, lithium carbide, chlorinated rubber, chlorine, boron, hydrides, ethylene, fluorine, sulphides, acetylides and strong reducing agents.

✓ = May be stored together

ⓘ = May be stored together with specific preventions

✗ = Must not be stored together



✗

FLAMMABLES



✗

EXPLOSIVES



✗

ACUTE TOXIC



✗

OXIDISERS



ⓘ

HARMFUL



✗

IRRITANT



ⓘ

CORROSIVE

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

### AUSTRALIAN EXPOSURE STANDARDS (Occupational Exposure Limits)

| Ingredient                     | Material name                         | TWA                      | STEL          |
|--------------------------------|---------------------------------------|--------------------------|---------------|
| Lead Monoxide (PbO)            | Lead, inorganic dusts & fumes (as Pb) | 0.15 mg / m <sup>3</sup> | Not Available |
| Lead oxide (PbO <sub>2</sub> ) | Lead, inorganic dusts & fumes (as Pb) | 0.15 mg / m <sup>3</sup> | Not Available |

### APPROPRIATE ENGINEERING CONTROLS

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

- Process controls which involve changing the way a job activity or process is done to reduce the risk.
- Enclosure and / or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

### PERSONAL PROTECTION



#### Respirator Type

Where the concentration of gas / particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

- Type E-P Filter of sufficient capacity.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator    | Powered Air Respirator |
|------------------------------------|----------------------|-------------------------|------------------------|
| up to 10 x ES                      | P1<br>Air-line*      | -                       | PAPR-P1<br>-           |
| up to 50 x ES                      | Air-line**           | P2                      | PAPR-P2                |
| up to 100 x ES                     | -                    | P3                      | -                      |
| 100+ x ES                          | -                    | Air-line*<br>Air-line** | -<br>PAPR-P3           |

\* Negative pressure demand

\*\* Continuous flow



#### Other Protection

- Eyewash unit.
- Barrier cream.
- Skin cleansing cream.



#### Eye Protection

- Safety glasses with side shields Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.



#### Glove Type

- Wear chemical protective gloves, e.g. PVC



#### Clothing

- Overalls.



#### Foot wear

- Wear safety footwear or safety gumboots e.g. Rubber

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                        |  |                                 |                  |
|------------------------|--|---------------------------------|------------------|
| <b>Appearance</b>      | Pale yellow / bright yellow orange coloured, very dense, odourless powder. Does not mix with water but classed as "soluble" under the provisions of SP 199 of the UN Transport Code. |                                 |                  |
| <b>Odour</b>           | Not Available  | <b>Vapour pressure (kPa)</b>    | 1 mm Hg @ 973 °C |
| <b>Odour threshold</b> | Not Available  | <b>Vapour density (Air = 1)</b> | Not Applicable   |

|  |                |   |                                  |
|--|----------------|---|----------------------------------|
| <b>pH</b>  | Not Applicable | <b>Relative density (Water = 1)</b>             | 9.53-9.6                         |
| <b>Melting point / freezing point (°C)</b>           | 888 °C         | <b>Solubility in water (g,L)</b>                | Immiscible                       |
| <b>Initial boiling point and boiling range (°C)</b>  | 1472 °C        | <b>Partition coefficient: n-octanol / water</b> | Not Available                    |
| <b>Flash point</b>                                   | Not Applicable | <b>Molecular weight (g / mol)</b>               | 223.2 g / mol                    |
| <b>Evaporation rate</b>                              | Not Available  | <b>Decomposition temperature (°C)</b>           | >500-700 °C lead fumes given off |
| <b>Flammability</b>                                  | Not Applicable | <b>Viscosity</b>                                | Not Available                    |
| <b>Upper, lower flammability or explosive limits</b> | Not Applicable |   |                                  |

## 10. STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>Reactivity</b>                         | See section 7 and this section under Chemical stability <ul style="list-style-type: none"> <li>Lead oxide:- is a strong oxidiser</li> <li>Attacks some plastics, rubber and coatings</li> </ul>  |
| <b>Possibility of hazardous reactions</b> | See section 5 & 7 <ul style="list-style-type: none"> <li>Reacts explosively with 90% performic acid, rubidium acetylide</li> <li>Reacts violently with strong oxidisers,</li> <li>Reacts violently with aluminium, sodium, zirconium, titanium, boron or silicon, when heated forms impact sensitive explosive mixtures with dichloromethylsilane</li> </ul>             |
| <b>Incompatible materials</b>             | See section 7 <ul style="list-style-type: none"> <li>Is incompatible with aluminium carbide, barium sulphide, silicon, sulphuryl chloride, hydrogen peroxide, chemical active metals, aluminium, combustible materials, lithium carbide, chlorinated rubber, chlorine, boron, hydrides, ethylene, fluorine, sulphides, acetylides and strong reducing agents.</li> </ul> |
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>Product is considered stable</li> <li>Hazardous polymerisation will not occur.</li> <li>Unstable in the presence of incompatible materials</li> </ul>   |
| <b>Hazardous decomposition products</b>   | See section 5<br>Thermal decomposition may produce oxides of lead.   |

## 11. TOXICOLOGICAL INFORMATION ACUTE EFFECTS

**No adverse health effects expected if the product is handled in accordance with this safety Data sheet and the product Label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:-**

|                        |  |
|------------------------|--|
| <b>Inhaled</b>         | The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless inhalation of dusts, or fumes, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.<br>Inhalation of dusts, generated by the material, during the course of normal handling, may be harmful.<br>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.              |
| <b>Ingestion</b>       | Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.  |
| <b>Skin contact</b>    | The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Abrasive damage however, may result from prolonged exposures.<br>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.<br>Open cuts, abraded or irritated skin should not be exposed to this material<br>Entry into the blood-stream, through for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.   |
| <b>Eye</b>             | Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result.   |
| <b>Chronic effects</b> | An inorganic compound such as Lead is a cumulative harmful poison when exposed in small amounts can raise the body's content to toxic levels. Prolonged or repeated exposure to lead toxicity effects the nervous system (memory loss, tiredness, headaches, fatigue, irritability, decreased libido, dizziness, depression, encephalopathy (brain damage caused by altered brain function and structure), behavioural effects, altered mood states, disturbances in hand-eye coordination, reaction times, visual motor performance, and mental performance, disturbances to vision, changes in hearing, muscle and joint weakness of the arms and legs, (foot-drop and wrist-drop), heart / blood vessels (reduced haemoglobin synthesis and production, reduced life span and function of red blood cells, anaemia, increased blood pressure), digestive system (loss of appetite, anorexia, with severe abdominal pain, diarrhoea, inflammation of the stomach walls (gastritis) and colic, cramps, nausea, vomiting, constipation, weight loss and decreased urination, deposition of blue lead-line on the gums), kidneys / urinary system (reversible / irreversible kidney damage) and |

endocrine system. Increased levels of lead result in increased brain damage, coma and death in extreme cases.

- Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.
- Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility.
- Lead can cross the placenta, and cause miscarriage, stillbirths and birth defects. Exposure before birth can cause mental retardation, behavioural disorders and infant death.
- Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).
- Ample evidence exists that developmental disorders are directly caused by human exposure to the material.
- Lead can accumulate in the skeleton for a very long time.

| Acute Toxicity | Skin Irritation / Corrosion | Serious Eye Damage / Irritation | Respiratory Or Skin Sensitisation | Mutagenicity | Carcinogenicity | Reproductivity | Stot - Single Exposure | Stot - Repeated Exposure | Aspiration Hazard |
|----------------|-----------------------------|---------------------------------|-----------------------------------|--------------|-----------------|----------------|------------------------|--------------------------|-------------------|
| ✓              | ⓘ                           | ⓘ                               | ⓘ                                 | ⓘ            | ⓘ               | ✓              | ⓘ                      | ✓                        | ⓘ                 |

✓ = Data required to make classification available ✗ = Data available but does not fill the criteria for classification

ⓘ = Data Not Available to make classification

## 12. ECOLOGICAL INFORMATION

### Toxicity

- DO NOT discharge into sewer or waterways.
- Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
- Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
- Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

#### For Lead:

- **Environmental Fate:** Lead is assessed as low hazard if it remains in its solid, massive, metallic form. Lead, in the form of alkyls, has been introduced to the environment primarily from leaded gasoline / petrol. These are converted to water-soluble lead compounds of high toxicity and availability to plants.
- **Atmospheric Fate:** Lead is primarily an atmospheric pollutant that enters soil and water as fallout, a process determined by the physical form involved and particle size. Lead, in the form of alkyls, has been introduced to the environment primarily from leaded gasoline / petrol. Lead is absorbed by mammals / humans via vapors, contaminated dust, and fumes.
- **Terrestrial Fate:** Soil - Lead alkyls easily leach from soil to contaminate water sources close to highways. Plants - Lead alkyls that have been converted to water soluble lead compounds have high toxicity / availability to plants.
- **Aquatic Fate:** Lead that has entered the aquatic system is expected to be found in sediments.
- **Ecotoxicity:** Soluble or insoluble lead may enter the environment and accumulate. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### Fish

The following applies to lead compounds in general: fish: lethal from 1.4 mg / l up S. gairdnerii: LC50: 0.14 mg / l / 96h L. idus LC50: 546 mg / l fish test LC50: 236 mg / l (calc. as free lead).

### Daphnia

The following applies to lead compounds in general: fish: lethal from 1.4 mg / l up S. gairdnerii: LC50: 0.14 mg / l / 96h L. idus LC50: 546 mg / l fish test LC50: 236 mg / l (calc. as free lead).

### Algae

The following applies to lead compounds in general: algae: Sc. quadricauda toxic from 3.7 mg / l up M. aeruginosa 0.45 mg / l (calc. as free lead).

### Bacteria

The following applies to lead compounds in general: algae: Sc. quadricauda toxic from 3.7 mg / l up M. aeruginosa 0.45 mg / l (calc. as free lead).

### Other Organisms

The following applies to lead compounds in general: protozoa: E. sulcatum toxic from 0.02 mg / l up U. parduczi toxic from 0.07 mg / l up (calc. as free lead).

### Degradability

No Data available for all ingredients

### Bio-accumulative Potential

- Lead Monoxide LOW (BCF = 43)

### Mobility in Soil

No Data available for all ingredients

### Other Adverse Effects

No Data available for all ingredients

## 13. DISPOSAL CONSIDERATIONS

### Safe Handling & Disposal

- Dispose in accordance with federal, state or local regulations.

### Disposal of Contaminated Packaging

- Containers may still present a chemical hazard / danger when empty.
- Return to supplier for reuse / recycling if possible.
- Otherwise:
- If container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- Where possible retain label warnings and SDS and observe all notices pertaining to the product.
- Legislation addressing waste disposal requirements may differ by country, state and / or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
- This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the

supplier of the material should be consulted.

- DO NOT allow wash water from cleaning or process equipment to enter drains.
  - It may be necessary to collect all wash water for treatment before disposal.
  - In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
  - Where in doubt contact the responsible authority.
  - Recycle wherever possible or consult manufacturer for recycling options.
  - Consult State Land Waste Management Authority for disposal.
  - Bury residue in an authorised landfill.
  - Recycle containers if possible, or dispose of in an authorised landfill.
  - Observe all label safeguards until containers are cleaned and destroyed.
- Environmental Regulations**
- Dispose in accordance with federal, state or local regulations.
  - Refer to section 15

#### 14. TRANSPORT INFORMATION

**REGULATED FOR TRANSPORT OF DANGEROUS GOODS ADG**

|                               |                                |                                 |
|-------------------------------|--------------------------------|---------------------------------|
| <b>UN Number</b>              | 2291                           |                                 |
| <b>Proper Shipping Name</b>   | LEAD COMPOUND, SOLUBLE, N.O.S. |                                 |
| <b>Transport Hazard Class</b> | Class: 6.1                     | <b>Sub risk:</b> Not Applicable |
| <b>Packing group</b>          | III                            |                                 |
| <b>Environmental Hazards</b>  | No relevant data               |                                 |
| <b>Special Precautions</b>    | Special provisions             | 199, 274                        |
|                               | Limited quantity               | 5 kg                            |
| <b>Additional Information</b> | Marine Pollutant: Yes          |                                 |
| <b>Hazchem Code</b>           | 2Z                             |                                 |



#### 15. REGULATORY INFORMATION

**SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS, LEGISLATION**

**Lead Monoxide (PbO) Lead Oxide (PbO<sub>2</sub>) are found on the following regulatory lists** Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft", "Australia Hazardous Substances Information System - Consolidated Lists"

|                                     |              |                    |   |
|-------------------------------------|--------------|--------------------|---|
| <b>Poisons Schedule (Australia)</b> | 6            | <b>AICS Status</b> | All the constituents of this product are listed |
| <b>APVMA Status</b>                 | Not relevant | <b>AQIS Status</b> | Status not relevant                             |
| <b>TGA Status</b>                   | Not relevant |                    |   |

**Other References**

ADG Code - Australian Transport of Dangerous Goods  
 Workplace Exposure Standard for Airborne Contaminants  
 Approved Criteria for Classifying Hazardous Substances NOHSC: 1008 (2004)  
 Hazardous Substances Information System (HSIS)  
 Model Work Health and Safety Regulations 2011, Chapter 7 Hazardous Chemicals, Part 7.2 Lead.  
 Labelling of Workplace Hazardous Chemicals- Code Of Practice  
 Preparation of Safety Data Sheets for Hazardous Chemicals- Code of Practice

#### 16. OTHER RELEVANT INFORMATION

| Revision Information | Revision No | Date      | Description          |
|----------------------|-------------|-----------|----------------------|
|                      | 1           | 28 /10/15 | Initial SDS creation |

|                      |              |   |
|----------------------|--------------|---|
| <b>Abbreviations</b> | <b>AICS</b>  | Australia Inventory of Chemical Substances  |
|                      | <b>APVMA</b> | Australian Pesticides and Veterinary Medicines Authority  |
|                      | <b>AQIS</b>  | Australian Quarantine and Inspection Service  |
|                      | <b>CAS #</b> | Chemical Abstract Service Number – used to uniquely identify chemical compounds   |
|                      | <b>IARC</b>  | International Agency for Research on Cancer   |
|                      | <b>LC50</b>  | Lethal Concentration- toxicity of the surrounding medium that will kill half of the sample population of a specific test-animal in a specified period through exposure via inhalation (respiration) |
|                      | <b>SDS</b>   | Safety Data Sheet- (SDS), previously called a Material Safety Data Sheet (MSDS),  |
|                      | <b>TGA</b>   | Therapeutic Goods Administration  |