# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### 1.1 Product identifier

**Product name** **LeachWELL GC**

**Synonyms** LEACHWELL

### 1.2 Uses and uses advised against

**Uses** CYANIDE LEACH ACCELERATING AGENT ● GOLD PROCESSING REAGENT ● INTENSE CYANIDATION OF GOLD FROM CONCENTRATES ● MINING INDUSTRY

### 1.3 Details of the supplier of the product

**Supplier name** **MINERAL PROCESS CONTROL (MPC) PTY LTD**

**Address** Unit 3, 30 Furniss Road, Landsdale, WA, 6065, AUSTRALIA

**Telephone** (08) 9303 2334

**Email** info@mpcwa.com

**Website** http://www.mpcwa.com

### 1.4 Emergency telephone numbers

**Emergency (Australia)** 13 11 26

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

**Physical Hazards**

Not classified as a Physical Hazard

**Health Hazards**

Acute Toxicity: Oral: Category 4
Skin Sensitisation: Category 1
Serious Eye Damage / Eye Irritation: Category 2A
Acute Toxicity: Inhalation: Category 4
Toxic to Reproduction: Category 1B
Specific Target Organ Toxicity (Repeated Exposure): Category 2

**Environmental Hazards**

Not classified as an Environmental Hazard

### 2.2 GHS Label elements

**Signal word** **DANGER**

**Pictograms**

**Hazard statements**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H360 | May damage fertility or the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |

**Prevention statements**

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P264 | Wash thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. |

**Response statements**

| | |
|---|---|
| P302 + P352 | IF ON SKIN: Wash with plenty of water. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308 + P313 | IF exposed or concerned: Get medical advice/ attention. |
| P321 | Specific treatment is advised - see first aid instructions. |
| P330 | Rinse mouth. |
| P362 + P364 | Take off contaminated clothing and wash it before reuse. |

**Storage statements**

| | |
|---|---|
| P405 | Store locked up. |

**Disposal statements**

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with relevant regulations. |

### 2.3 Other hazards

No information provided.

## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

### 3.1 Substances / Mixtures

| Ingredient | CAS Number | EC Number | Content |
|---|---|---|---|
| M-NITROBENZENESULPHONIC ACID, SODIUM SALT | 127-68-4 | 204-857-3 | 95% |
| LEAD (II) NITRATE | 10099-74-8 | 233-245-9 | 2% |
| NON HAZARDOUS INGREDIENTS | Not Available | Not Available | Remainder |

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

| | |
|---|---|
| **Eye** | If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes. |
| **Inhalation** | If inhaled, remove from contaminated area. To protect rescuer, use a Full-face Class P2 (Particulate) respirator or an Air-line respirator where an inhalation risk exists. Apply artificial respiration if not breathing. |
| **Skin** | If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor. |
| **Ingestion** | For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). |
| **First aid facilities** | Eye wash facilities and safety shower should be available. |

### 4.2 Most important symptoms and effects, both acute and delayed

Lead is a cumulative poison and may cause kidney, central nervous system and blood damage with repeated exposure.

### 4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Dry agent or foam. Prevent contamination of drains and waterways.

### 5.2 Special hazards arising from the substance or mixture

Combustible. May evolve toxic gases (lead/ carbon oxides, hydrocarbons) when heated to decomposition. May evolve nitrogen oxides and sulphur oxides when heated to decomposition.

### 5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

### 5.4 Hazchem code

None allocated.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

### 6.2 Environmental precautions

Prevent product from entering drains and waterways.

### 6.3 Methods of cleaning up

Contain spillage, then collect and place in suitable containers for disposal. Eliminate all sources of ignition.

### 6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure product is adequately labelled, protected from physical damage and sealed when not in use. Do not allow exposure to air for prolonged periods. Store out of direct sunlight.

### 7.3 Specific end uses

No information provided.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

**Exposure standards**

| Ingredient | Reference | TWA | | STEL | |
|---|---|---|---|---|---|
| | | ppm | mg/m³ | ppm | mg/m³ |
| Lead, inorganic dusts & fumes (as Pb) | SWA [AUS] | -- | 0.05 | -- | -- |

**Biological limits**

No biological limit values have been entered for this product.

### 8.2 Exposure controls

**Engineering controls** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

**PPE**

| | |
|---|---|
| **Eye / Face** | Wear dust-proof goggles. |
| **Hands** | Wear nitrile or neoprene gloves. When using large quantities or where heavy contamination is likely, wear full-length PVC gloves. |
| **Body** | Wear coveralls. |
| **Respiratory** | Where an inhalation risk exists, wear a Class P3 (particulate) / N100 respirator. At high dust levels, wear an Air-line / Full Facepiece Supplied-Air Respirator (SAR). |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Appearance** | PALE BLUE GRANULAR SOLID |
| **Odour** | ODOURLESS |
| **Flammability** | COMBUSTIBLE |
| **Flash point** | > 100°C |
| **Boiling point** | NOT AVAILABLE |
| **Melting point** | 350°C |
| **Evaporation rate** | NOT AVAILABLE |
| **pH** | 6 to 10 (1 % solution) |
| **Vapour density** | NOT AVAILABLE |
| **Relative density** | 0.68 (Approximately) |
| **Solubility (water)** | 200 g/L @ 20°C |
| **Vapour pressure** | NOT AVAILABLE |
| **Upper explosion limit** | NOT AVAILABLE |
| **Lower explosion limit** | NOT AVAILABLE |
| **Partition coefficient** | NOT AVAILABLE |
| **Autoignition temperature** | NOT AVAILABLE |
| **Decomposition temperature** | NOT AVAILABLE |
| **Viscosity** | NOT AVAILABLE |
| **Explosive properties** | NOT AVAILABLE |
| **Oxidising properties** | NOT AVAILABLE |
| **Odour threshold** | NOT AVAILABLE |

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

### 10.2 Chemical stability

No information provided.

### 10.3 Possibility of hazardous reactions

No information provided.

### 10.4 Conditions to avoid

No information provided.

### 10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), prolonged exposure to air, sunlight, heat and ignition sources. Incompatible with brass, copper and nickel.

### 10.6 Hazardous decomposition products

May evolve toxic gases (lead/ carbon oxides, hydrocarbons) when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity** Lead compounds are expected to be harmful if swallowed, in contact with skin, and/or if inhaled. Typical acute clinical manifestations of lead poisoning include weakness, irritability, asthenia, nausea, abdominal pain with constipation, and anaemia.

**Information available for the ingredients:**

| Ingredient | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| M-NITROBENZENESULPHONIC ACID, SODIUM SALT | 11 g/kg (rat) | -- | > 5100 mg/m³/4 hours (rat) |

**Skin** Contact may result in irritation, redness, pain, rash and dermatitis.

**Eye** Contact may result in irritation, lacrimation, pain and redness.

**Sensitisation** May cause an allergic skin reaction. This product is not classified as a respiratory sensitiser.

**Mutagenicity** The evidence for genotoxic effects of lead is contradictory, with numerous studies reporting both positive and negative effects. Responses appear to be induced by indirect mechanisms, mostly at very high concentrations that lack physiological relevance.

**Carcinogenicity** Lead compounds (inorganic) are classified as probably carcinogenic to humans (IARC Group 2A).

**Reproductive** There is sufficient data to indicate that lead compounds may damage fertility or the unborn child.

**STOT - single exposure** Over exposure to lead may result in severe headache, breathing difficulties, abdominal muscle pain, irritability, nausea and constipation.

**STOT - repeated exposure** Lead is a cumulative poison, and symptoms are often delayed. Over exposure may result in lead poisoning. Repeated exposure may result in blood, kidney and central nervous system/brain damage.

**Aspiration** Not classified as causing aspiration.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Lead is potentially toxic to all aquatic organisms, with organic lead compounds tending to be more toxic than inorganic lead compounds. Lead becomes more toxic to fish as dissolved oxygen levels decrease. Toxicity to aquatic organisms increases in acidic or soft water.

### 12.2 Persistence and degradability

Inorganic lead does not degrade.

### 12.3 Bioaccumulative potential

Inorganic lead is considered to be bioaccumulating in the environment, and may accumulate in aquatic and terrestrial plants and animals.

### 12.4 Mobility in soil

Organic lead compounds typically have low to moderate mobility in soil and groundwater due to their affinity for organic matter and particles. They tend to adsorb strongly to soil and sediment components, which limits their leaching potential.

### 12.5 Other adverse effects

Avoid contamination of drains and waterways.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**Waste disposal** Return to manufacturer/supplier where possible. Contact the manufacturer/supplier for additional information (if required).

**Legislation** Dispose of in accordance with relevant local legislation.

## 14. TRANSPORT INFORMATION

**NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA**

| | LAND TRANSPORT (ADG) | SEA TRANSPORT (IMDG / IMO) | AIR TRANSPORT (IATA / ICAO) |
|---|---|---|---|
| **14.1 UN Number** | None allocated. | None allocated. | None allocated. |
| **14.2 Proper Shipping Name** | None allocated. | None allocated. | None allocated. |
| **14.3 Transport hazard class** | None allocated. | None allocated. | None allocated. |
| **14.4 Packing Group** | None allocated. | None allocated. | None allocated. |

**14.5 Environmental hazards**

No information provided.

**14.6 Special precautions for user**

**Hazchem code** None allocated.

## 15. REGULATORY INFORMATION

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Poison schedule** Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Classifications** Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

**Inventory listings** **AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)**
All components are listed on AIIC, or are exempt.

## 16. OTHER INFORMATION

**Additional information**

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGE (TWA) or WES (WORKPLACE EXPOSURE STANDARD) (NZ): Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Abbreviations**

| | |
|---|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| CAS # | Chemical Abstract Service number - used to uniquely identify chemical compounds |
| CNS | Central Nervous System |
| EC No. | EC No - European Community Number |
| EMS | Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods) |
| GHS | Globally Harmonized System |
| GTEPG | Group Text Emergency Procedure Guide |
| IARC | International Agency for Research on Cancer |
| LC50 | Lethal Concentration, 50% / Median Lethal Concentration |
| LD50 | Lethal Dose, 50% / Median Lethal Dose |
| mg/m³ | Milligrams per Cubic Metre |
| OEL | Occupational Exposure Limit |
| pH | relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline). |
| ppm | Parts Per Million |
| STEL | Short-Term Exposure Limit |
| STOT-RE | Specific target organ toxicity (repeated exposure) |
| STOT-SE | Specific target organ toxicity (single exposure) |
| SUSMP | Standard for the Uniform Scheduling of Medicines and Poisons |
| SWA | Safe Work Australia |
| TLV | Threshold Limit Value |
| TWA | Time Weighted Average |

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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