SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **LeachWELL 60X**

Synonyms LEACHWELL

1.2 Uses and uses advised against

Uses ASSAY LABORATORY REAGENT ● CYANIDE LEACH ACCELERATING AGENT ● CYANIDE RECOVERABLE GOLD, COPPER AND SILVER ASSAYS ● GOLD PROCESSING REAGENT ● 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	3%

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 RED 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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