

SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name SLAG REDUCTION FURNACE BULLION
Synonym(s) REMELTED LEAD INGOTS • SRF BULLION • SRF BUTTS

1.2 Uses and uses advised against

Use(s) INDUSTRIAL APPLICATIONS

1.3 Details of the supplier of the product

Supplier name NYRSTAR PORT PIRIE
Address PO Box 219, Port Pirie, SA, 5540, AUSTRALIA
Telephone (08) 8638 1500
Fax (08) 8638 1583
Website <http://www.nyrstar.com>

1.4 Emergency telephone number(s)

Emergency (08) 8638 1500

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

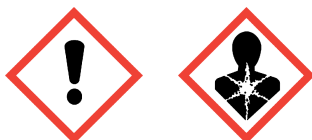
CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS

GHS classification(s) Acute Toxicity: Inhalation: Category 4
Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2
Acute Toxicity: Oral: Category 4
Toxic to Reproduction: Category 1A

2.2 Label elements

Signal word DANGER

Pictogram(s)



Hazard statement(s)

H302 Harmful if swallowed.
H332 Harmful if inhaled.
H360 May damage fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Prevention statement(s)

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.
P281 Use personal protective equipment as required.

PRODUCT NAME **SLAG REDUCTION FURNACE BULLION**

Response statement(s)

P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P330 Rinse mouth.

Storage statement(s)

P405 Store locked up.

Disposal statement(s)

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
LEAD	7439-92-1	231-100-4	>60%
ANTIMONY	7440-36-0	231-146-5	1 to 20%
ARSENIC	7440-38-2	231-148-6	1 to 10%
METALS	-	-	Not Available

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Exposure is considered unlikely.
Inhalation Due to product form / nature of use, an inhalation hazard is not anticipated.
Skin Exposure is considered unlikely. Skin irritation is not anticipated.
Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). Due to product form and application, ingestion is considered unlikely.
First aid facilities No information provided.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Non flammable. May evolve toxic gases (lead oxides) when heated to decomposition.

5.3 Advice for firefighters

No fire or explosion hazard exists.

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.

PRODUCT NAME SLAG REDUCTION FURNACE BULLION

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

If spilt, collect and return to manufacturer.

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 removed from incompatible substances and foodstuffs. Ensure product is adequately labelled.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Antimony & compounds (as Sb)	SWA (AUS)	--	0.5	--	--
Arsenic & soluble compounds (as As)	SWA (AUS)	--	0.05	--	--
Lead, inorganic dusts & fumes (as Pb)	SWA (AUS)	--	0.15	--	--

Biological limits

Ingredient	Determinant	Sampling Time	BEI
ARSENIC	Inorganic arsenic plus methylated metabolites in urine	End of workweek	35 µg As/L
LEAD	Lead in blood	Not critical	30 ug/100 ml

Reference: ACGIH Biological Exposure Indices

8.2 Exposure controls

Engineering controls

No special precautions are normally required when handling this product. Maintain dust / fume levels below the recommended exposure standard.

PPE

Eye / Face	Wear safety glasses.
Hands	Wear leather gloves.
Body	Wear safety boots.
Respiratory	Not required under normal conditions of use.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	SILVER/GREY SOLID (3 TONNE)
Odour	SLIGHT ODOUR

9.1 Information on basic physical and chemical properties

Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Specific gravity	NOT AVAILABLE
Solubility (water)	INSOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
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

9.2 Other information

% Volatiles	NOT AVAILABLE
-------------	---------------

10. STABILITY AND REACTIVITY

10.1 Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid contact with incompatible substances.

10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites) and acids (e.g. nitric acid).

10.6 Hazardous decomposition products

May evolve toxic gases (lead oxides) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health hazard summary	Harmful. However, due to the product form (solid), the potential for overexposure may be reduced. Lead is a cumulative poison and has the potential to cause chronic health effects. Use safe work practices to avoid hand to mouth transference and fume inhalation (if strongly heated). Lead compounds (inorganic) are classified as probably carcinogenic to humans (IARC Group 2A). Arsenic and arsenic compounds are classified as carcinogenic to humans (IARC Group 1). Due to product form adverse health effects are not anticipated.	
Eye	Exposure considered unlikely. Due to product form and nature of use, the potential for exposure is reduced.	
Inhalation	Exposure considered unlikely. Due to product form and nature of use, an inhalation hazard is not anticipated with normal use.	
Skin	Non irritant. Metallic lead is very poorly absorbed through the skin and is therefore not considered a hazard through this route of exposure.	
Ingestion	Ingestion is considered unlikely due to product form. Maintain good personal hygiene standards. Chronic exposure may result in lead poisoning.	
Toxicity data	LEAD (7439-92-1)	
	LD50 (oral)	50 - 600 mg/kg (calf)
	ANTIMONY (7440-36-0)	

PRODUCT NAME SLAG REDUCTION FURNACE BULLION

ANTIMONY (7440-36-0)	
LD50 (oral)	7000 mg/kg (rat)
ARSENIC (7440-38-2)	
LD50 (oral)	15 mg/kg (rat)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Due to product form and low solubility, the environmental impact of this product is expected to be minimal. However, should the product dissolve slightly following prolonged immersion in waterways, the soluble lead compounds will be toxic to aquatic organisms, livestock and irrigable plants.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

No information provided.

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 Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes Repr. Reproductive toxin
Xn Harmful

PRODUCT NAME SLAG REDUCTION FURNACE BULLION

Risk phrases	R20/22	Harmful by inhalation and if swallowed.
	R33	Danger of cumulative effects.
	R61	May cause harm to the unborn child.
	R62	Possible risk of impaired fertility.
Safety phrases	S45	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).
	S53	Avoid exposure - obtain special instructions before use.
	S60	This material and its container must be disposed of as hazardous waste.
Inventory listing(s)	AUSTRALIA: AICS (Australian Inventory of Chemical Substances) All components are listed on AICS, or are exempt.	

16. OTHER INFORMATION

Additional information EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: 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).

IARC GROUP 2B - POSSIBLE HUMAN CARCINOGEN. This product contains an ingredient which has demonstrated sufficient evidence to have been classified by the International Agency for Research into Cancer (IARC) as possibly carcinogenic to humans and whose use should be strictly monitored and controlled.

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.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as 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: 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 ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PRODUCT NAME SLAG REDUCTION FURNACE BULLION**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/m ³	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.

Prepared by

Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmt.com.au.

[End of SDS]