



MATERIAL SAFETY DATA SHEET

Aluminium Remelt Ingot

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name:	Aluminium Remelt Ingot
Applicable In:	Australia
Other Names:	Ingot Aluminium Remelt, Aluminium Standard Ingot, Primary Aluminium Ingot
Recommended use:	Feedstock for manufacturing aluminium parts and products
Supplying Company:	Gove Aluminium Finance Limited (ABN 45 001 860 073)
Address:	Triniti 3, 39 Delhi Road, North Ryde NSW 2113 Australia
Telephone:	+61 2 9235 8144 (Or 1800 807 668 (available in Australia only))
Facsimile:	+61 2 9235 8166
Producing Company:	Tomago Aluminium Company Pty Limited (ABN 68 001 862 228)
Address:	33 Tomago Road Tomago NSW 2322 Australia
Telephone:	+61 2 4966 9669
Facsimile:	+61 2 4966 9711
Emergency Phone Number:	Poisons Information Centre 13 11 26

This Material Safety Data Sheet (MSDS) is issued by the Supplier in accordance with the Code and guidelines from Safe Work Australia (SWA – formerly Australian Safety and Compensation Council - ASCC, and National Occupational Health and Safety Commission - NOHSC). The information in it must not be altered, deleted or added to. The Supplier will not accept any responsibility for any changes made to its MSDS by any other person or organization. The Supplier will issue a new MSDS when there is a change in product specifications and/or SWA standards, codes, guidelines, or regulations.

SECTION 2: HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE: product as supplied is classified as **Non Hazardous** according to the Approved Criteria For Classifying Hazardous Substances [NOHSC:1008] 3rd Edition.

Dust from cutting grinding or abrading aluminium metal is classified as **Hazardous**
Fume from heating aluminium metal to over melting point is classified as **Hazardous**

Aluminium Remelt Ingot is classified as **Non-Dangerous Goods** according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. This product is not specifically regulated by International Maritime Organisation or the International Maritime Dangerous Goods Code.

The following Risk & Safety phrases relate to the dust or fumes:

Risk Phrases	Safety Phrases
R20: Harmful by inhalation.	S22: Do not breathe dust.
R36/37/38: Irritating to eyes, respiratory system and skin	S23: Do not breathe gas/fumes

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	Proportion:	CAS Number:
Aluminium	>90%	7429-90-5
Silicon	<10%	7440-21-3
Iron	<1%	7439-89-6
Magnesium	<0.1%	7439-95-4
Copper	<0.1%	7440-50-8
Manganese	<0.1%	7439-96-5
Chromium	<0.1%	7440-47-3
Nickel	<0.1%	7440-02-0
Titanium	<0.1%	7440-32-6
Boron	<0.1%	7440-42-8
Zinc	<0.1%	7440-66-6
Strontium	<0.1%	7440-24-6

SECTION 4: FIRST AID MEASURES

Product as supplied is a solid metal and First Aid Measures are non-applicable.

The following First Aid measures are applicable to dust or fumes from melted aluminium:

Swallowed: Rinse mouth and lips with water. Do not induce vomiting. If symptoms persist, seek medical attention.

Eyes: Flush thoroughly with flowing water, while holding eyelids open, for 15 minutes to remove all traces. If symptoms such as irritation or redness persist, seek medical attention.

Skin: Remove heavily contaminated clothing. Wash off skin thoroughly with water. Use a mild soap if available. Seek medical attention for persistent redness or irritation of the skin.

Inhaled: Remove to fresh air. If symptoms persist, seek medical attention.

Advice to Doctor: Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Flammability: This product as supplied is non flammable. Fine dusts present an explosion hazard if dispersed in air at high levels, however due to product form the potential for such explosion is minimal. Reaction with acids or alkalis may generate flammable gas.

Suitable extinguishing media: In a fire situation DO NOT use water or foam. Extinguish with dry chemical Class D extinguisher or smother with dry, uncontaminated sand.

Hazards from combustion products: None

Special protective precautions and equipment for fire fighters: None

Hazchem Code: None

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spills: Collect and reuse where possible.

SECTION 7: HANDLING AND STORAGE

Handling: To avoid possible explosion ingots need to be clean and dry when loaded into molten metal, or preferably loaded into empty furnace. Remove polyester strapping if the ingots are to be loaded into a furnace with a chlorine or

chlorous salt environment. Danger of physical injury - bundles may collapse if over-stacked. If stacked the base needs to be smooth and level (not sloping).

All products loaded and transported from Tomago Aluminium site comply with New South Wales RTA rules and guidelines for load restraint. (Refer to RTA website www.rta.nsw.gov.au for more information.) Details of conforming restraints can be found on Tomago Aluminium website www.tomago.com.au/product-safety

Use in accordance with manual handling Regulations and Code of Practice.

For more information on the handling of aluminium, refer to the following documents published by the Aluminum Association, 1525 Wilson Boulevard, Suite 600, Arlington, VA 22209, USA:

“Guidelines for Handling Molten Aluminum”, Third Edition, 2002.

“Guidelines for Handling Aluminum Fines Generated during Various Aluminum Fabricating Operations”, Third Edition 2008.

Storage: Store away from strong alkalis, halogens, oxidising agents and halogenated hydrocarbons and any fire or explosion risks eg. ammonium nitrate. Prevent contact with all strong acids including hydrochloric acid, sulphuric acid, nitric acid and strong alkalis eg. potassium hydroxide and sodium hydroxide.

Incompatibilities: Reaction with acids or alkalis may generate flammable gas.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

This section applies to dust or fume from cutting, grinding or working of aluminium. When welding Aluminium, more information regarding exposure to welding fume should be sourced and applied, depending on welding method and working conditions.

Exposure Standards: **National Occupational Exposure Standard (NES) Safe Work Australia, SWA** (formerly ASCC/NOHSC)

Exposure to any Aluminium dust should be kept as low as practicable, and below the following NES.

Aluminium: 5 mg/m³ (fume), 10 mg/m³ (dust)

Silicon: 10 mg/m³ (Inspirable dust), STEL : 20 mg/m³ (Inspirable dust)

Total dust (of any type, or particle size): 10 mg/m³

Engineering Controls: Keep exposures to dust as low as practicable. Open air work or use of natural ventilation (opening of doors and windows in buildings) generally provides adequate ventilation. Local mechanical ventilation or extraction may be required in areas where dust standards cannot be achieved.

Ventilation:

Personal Protection

Skin Protection:

Excessive or repeated skin contact should be avoided by wearing long sleeved shirts and long trousers, a cap or hat, and gloves (standard duty leather or equivalent AS 2161). Wash work clothes regularly. Wash hands before eating, or smoking.

Eye Protection:

Ventilated non-fogging goggles (dust resistant AS/NZS 1336) should be worn when working in a dusty environment.

Respiratory Protection:

None required if engineering and handling controls are adequate. A suitable P1 or P2 particulate respirator chosen and used in accordance with AS/NZS 1715 and AS/NZS 1716 may be appropriate in dusty conditions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid grey-silvery metal ingots
Odour:	None
pH, at stated concentration:	Not determined
Vapour pressure:	Not determined
Vapour Density:	Not determined
Boiling Point/range:	2467°C
Freezing/Melting Point:	482-660°C
Solubility in water:	Insoluble
Solubility (Other):	Not applicable
Density: (H₂O = 1)	Range 2.5-2.9
Evaporation Rate:	Not applicable
Flammability Limits:	Not flammable
Flash Point:	Not applicable
Explosive Properties:	Not flammable

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable. Aluminium dust can be highly reactive. Work situations where aluminium dust is created in substantial amounts should be assessed for safety risks.

Incompatible Materials: Store away from strong alkalis, halogens, oxidising agents and halogenated hydrocarbons and any fire or explosion risks eg. ammonium nitrate. Prevent contact with all strong acids including hydrochloric acid, sulphuric acid, nitric acid and strong alkalis eg. potassium hydroxide and sodium hydroxide. Fine powder or freshly cleaned metal surface may react with water (evolving flammable gas).

Conditions to avoid: Dust and fume generation

Hazardous Decomposition products: None

Hazardous Polymerisation: None

SECTION 11: TOXICOLOGICAL INFORMATION

The following information is applicable to dust or fumes from melted aluminium:

Health Effects

Acute (short term).

Swallowed: Unlikely under normal industrial use, but swallowing may result in abdominal discomfort.

Eye: Irritating to the eyes, causing watering and redness. May aggravate pre-existing eye conditions.

Skin: May cause mild irritation, and drying to the skin due to its physical characteristics.

Inhaled: Dust is mildly irritating to the nose, throat and respiratory tract and may cause coughing and sneezing. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated.

Chronic (long term):

Swallowed: With large doses ingestion may result in nausea, vomiting and gastrointestinal irritation.

Eyes: Dust may cause irritation and inflammation of the eyes and aggravate pre-existing eye conditions.

Skin: Repeated heavy contact with the dust may cause drying of the skin and can result in skin rash (dermatitis) typically affecting the hands. Over time this may become chronic and can also become infected. Allergy to nickel and or chromium may occur.

Inhaled: Repeated exposure to high levels of dust may result in increased nasal and respiratory secretions and coughing. Inflammation of lining tissue of the respiratory system may follow repeated exposure to high levels of dust with increased risk of asthma, bronchitis and pneumonia.

Toxicity Data:

Manganese: LD50 (Ingestion): 9000 mg/kg (rat)

Silicon: LD50 (Ingestion): 3160 mg/kg (rat)

Iron: LD50 (Ingestion): 20000 mg/kg (guinea pig)

Boron: LD50 (Ingestion): 310 mg/kg (rabbit)

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Product is non-toxic to aquatic and terrestrial organisms.**Persistence and Degradability:** Product is persistent and would have a low degradability.**Mobility:** A low mobility would be expected in a landfill situation.

SECTION 13: DISPOSAL CONSIDERATIONS

Aluminium Remelt Ingot (and dust) should be recycled as scrap or can be treated as a common waste for disposal or dumped into a landfill site in accordance with local authority guidelines.

Measures should be taken to prevent dust generation during disposal and exposure and personal precautions should be observed (see Section 8).

SECTION 14: TRANSPORT INFORMATION

Transport Requirements:	No special transport requirements are necessary.
UN number:	None allocated
Class:	None allocated
Subsidiary Risk 1:	None allocated
Packaging Group:	None allocated
Hazchem code:	None allocated
DG Class:	None allocated
EPG:	None
Incompatibilities:	None
Proper Shipping Name:	None allocated
Marine Pollutant:	No

SECTION 15: REGULATORY INFORMATION

Poisons Schedule: None scheduled

SECTION 16: OTHER INFORMATION

Emergency Contact Number: Poisons Information Centre 13 11 26

For further information on this product, please contact the following:

Gove Aluminium Finance Limited (ABN 45 001 860 073),

Triniti 3, 39 Delhi Road, North Ryde, NSW 2113, Australia.

Phone +61 2 9235 8144 or 1800 807 668 (available in Australia only). Fax +61 2 9235 8166.

Additional information:

Australian Standards References:

- AS/NZS 1336 Recommended Practices for Occupational Eye Protection.
- AS/NZS 1715 Selection, Use and Maintenance of Respiratory Protective Devices.
- AS/NZS 1716 Respiratory Protective Devices.
- AS 2161 Industrial Safety Gloves and Mittens (excluding electrical and medical gloves).

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011(2003)], April 2003, National Occupational Health and Safety Commission.

Authorised by: Seppo Ranki

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END OF MSDS