

SAFETY DATA SHEET

ALUMINIUM EXTRUSION 6000 SERIES ALLOYS



1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Aluminium Extrusions 6000 Series Alloys* (Anodised)
Recommended Uses	Architectural, Structural, Transportation.

* **Synonyms:** 6060, 6063, 6106, 6005A, 6061

Company Name: McKechnie Aluminium Solutions Ltd
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2. HAZARD(S) IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO HAZARDOUS SUBSTANCES [CLASSIFICATION] REGULATIONS 2001

NOT CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO LAND TRANSPORT RULE: DANGEROUS GOODS 2005; NZS 5433, UN, IMDG CODE OR IATA

UN No. None Allocated **DG Class:** None Allocated **Subsidiary Risk(s):** None Allocated
Packing Group: None Allocated **Hazchem Code:** None Allocated

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS No.	Content
Aluminium	7429-90-5	>95%
Magnesium	7439-95-4	<1%
Silicon	7440-21-3	<1%
Copper	7440-50-8	<1%
Manganese	7439-96-5	<1%
Iron	7439-89-6	<1%
Chromium	7440-47-3	<1%
Nickel	7440-02-0	<1%
Titanium	7440-32-6	<1%
Boron	7440-42-8	<1%
Zinc	7440-66-6	<1%

4. FIRST AID MEASURES

Products are supplied as anodized extruded sections. These are classified as Manufactured Articles and do not pose any health hazards under normal conditions of use, and first aid measures are non-applicable

Potential health effects

The following first aid measures are applicable to dust or fumes that may arise during further processing of anodized extruded product, or unless the material is heated to melting.

SAFETY DATA SHEET

ALUMINIUM EXTRUSION 6000 SERIES ALLOYS



Eye	If in eyes, hold eyelids apart and flush continuously with running water or saline solution. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
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.
Inhalation	If inhaled, remove from contaminated area. Check for clear airway, breathing and presence of pulse. If breathing is difficult, provide oxygen. Loosen any tight clothing on neck or chest. Apply artificial respiration if not breathing.
Ingestion	For advice, contact the National Poisons Centre at 0800 764 766 (0800 POISON) or +64 3 479 7227 or a doctor (at once). Due to product form and application, ingestion is considered unlikely.
Advice to Doctor	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammability	Anodised extruded aluminium product does not present a fire or explosion hazards as shipped, i.e. is non-flammable. Fine dusts present an explosion hazard if dispersed in air at high levels, however due to this 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 (dry chemical powder) or smother with dry, uncontaminated sand.
Hazards from Combustion Products	None
Special Protective Precautions and Equipment for Fire Fighters	None
Hazchem Code	None

6. SPILLAGE, ACCIDENTAL RELEASE MEASURES

Spills	<p>Collect damaged product and reuse where possible.</p> <p>In the event of a molten metal spill avoid contact with skin and eyes. Do not attempt to arrest the flow of molten aluminium with shovels, hand tools or footwear. Contain spill with dry sand. Allow the spill to cool before remelting as scrap.</p>
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SAFETY DATA SHEET

ALUMINIUM EXTRUSION 6000 SERIES ALLOYS



7. HANDLING AND STORAGE

Handling	Before use carefully read the McKechnie Technical Information data available on the web site or product data sheets. 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.
Storage	Aluminium is considered stable under normal handling conditions. Keep extrusions clean and dry during transport. Store extrusions in clean, dry, heated areas to avoid ingress of moisture or contaminants. Store away from strong alkalis, halogens, oxidising agents and halogenated hydrocarbons and any fire or explosion risks e.g. ammonium nitrate. Prevent contact with all strong acids including hydrochloric acid, sulphuric acid, nitric acid and strong alkalis e.g. potassium hydroxide and sodium hydroxide.
Incompatibilities	Reaction with acids or alkalis may generate flammable gas.

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

Exposure to any Aluminium dust should be kept as low as practicable, and below the following WES (NZ).

Exposure Standards

Ingredient	TWA (8 Hrs)
Aluminium, as Al (Alkyls)	2 mg/m ³
Aluminium, as Al (Pyro dust)	5 mg/m ³
Aluminium, as Al (Metal Dust)	10 mg/m ³
Aluminium, as Al (Welding fumes)	5 mg/m ³
Aluminium, as Al (soluble salts)	5 mg/m ³

Engineering Controls Ventilation:

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.

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). Possibility of sharp edges, use gloves when handling. Aluminium experiences no colour change when heated – use gloves to protect against burns. 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.

SAFETY DATA SHEET

ALUMINIUM EXTRUSION 6000 SERIES ALLOYS

**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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid black - silver grades of anodized finish depending on customer requirements, in various extruded profiles, lengths and weights
Odour:	Odourless
pH, at stated concentration:	Not relevant
Vapour pressure:	Not determined
Vapour Density:	Not determined
Boiling Point/range:	2467°C
Freezing/Melting Point:	550-660°C
Solubility in water:	Insoluble
Solubility (Other):	Not applicable
Specific gravity: (H₂O = 1)	2.7
Evaporation Rate:	Not applicable
Flammability Limits:	Not flammable
Flash Point:	Not applicable
Explosive Properties:	Not flammable

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended conditions of storage and transport.
Conditions to Avoid	Avoid heat, sparks, open flames and other ignition sources. Grinding, sanding, buffing and polishing operations may generate potentially explosive aluminium dust, fines and particulate. Adequate vacuum and dust collection systems are recommended.
Material to Avoid	Incompatible with oxidising agents (e.g. hypochlorite's), acids (e.g. nitric acid) and alkalis (e.g. hydroxides). Fine powder or freshly cleaned metal surface may react with water (evolving flammable hydrogen gas).

SAFETY DATA SHEET

ALUMINIUM EXTRUSION 6000 SERIES ALLOYS



Hazardous Decomposition Products	May evolve aluminium oxides when heated to decomposition.
Polymerization	Hazardous polymerization reaction is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	<p>Low toxicity. Chronic exposure to dust from processing may result in breathing difficulties and lung fibrosis.</p> <p>However, due to the product form, dust generation/inhalation is not anticipated with normal use. Inhalation of fume may result in adverse respiratory symptoms including dryness of respiratory tract and chronic coughing. Contact with molten material can cause severe burns and permanent injury.</p>
Eye	Due to product form, the potential for exposure is reduced, unless cut or heated and dust or fumes generated.
Inhalation	Aluminium metal is essentially non-toxic. Over exposure to dust or fumes (if heated) may result in mucous membrane irritation. Due to product form, an inhalation hazard is not anticipated with normal use.
Skin	Low irritant. Due to product form, irritation is not expected unless cut or heated. Contact with hot material may cause skin burns.
Ingestion	Ingestion is considered unlikely due to product form.
Toxicity Data	<p>No LD50 data available for this product.</p> <p>No toxicity data is available for this product in the form supplied</p> <p>Base Metal: No reports of effects from prolonged or repeated exposure.</p> <p>Anodised Surface: The aluminium oxide anodic layer is functionally inert.</p>

12. ECOLOGICAL INFORMATION

Environment	No special environmental precautions are required. Local sources have an insignificant contribution and impact on environment. Aluminium is the most common metal in the earth's crust. All aluminium in soil comes from natural sources.
Persistence / Degradability	Product is persistent and would have a low degradability.
Mobility	A low mobility would be expected in a landfill situation.

SAFETY DATA SHEET

ALUMINIUM EXTRUSION 6000 SERIES ALLOYS



Ecotoxicity	Transformation/dissolution data are not available for aluminium metal, however is similar in solubility to aluminium oxide. The No Observed Effect Concentrations (NOECs) for aluminium oxide in testing of fish, invertebrate, and algae are all above 100 mg/L so the LC50s are even higher.
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13. DISPOSAL CONSIDERATIONS

Waste Disposal	Reuse extruded product where ever possible, or return to McKechnie Aluminium Solutions, supplier or recognised scrap dealer. Alternatively, dispose of at an approved landfill site. Contact McKechnie Aluminium Solutions for additional information.
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO LAND TRANSPORT RULE: DANGEROUS GOODS 2005; NZS 5433, UN, IMDG CODE OR IATA

Shipping Name: None Allocated

UN No. None Allocated

DG Class: None Allocated

Subsidiary Risk(s): None Allocated

Packing Group: None Allocated

Hazchem Code: None Allocated

15. REGULATORY INFORMATION

Not applicable – no restrictions / exclusions for aluminium per EPA HSNO The extruded products come under the jurisdiction of Manufactured Articles.

16. OTHER INFORMATION

For further information, please contact Technical Services on the numbers listed in Section 1.

The information contained in this SDS is based on current data which to the best of our knowledge is intended to describe these extruded products' for the purposes of health, safety and environmental requirements only. Do not use this SDS for guaranteeing any specific property of these product's.
