Infosafe No™ 1CHCU Issue Date :November 2021 RE-ISSUED by CHEMSUPP

Product Name **ALUMINIUM Sheet**

Not classified as hazardous

1. Identification

GHS Product Identifier	ALUMINIUM Sheet
Company Name	CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia
Telephone/Fax Number	Tel: (08) 8440-2000
Emergency phone number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)
E-mail Address	www.chemsupply.com.au
Recommended use of the chemical and restrictions on use	Laboratory reagent.

Other Names

Name	Product Code
ALUMINIUM Sheet LR	AL041

Other Information

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture

Not classified as hazardous according to the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)] 3rd Edition, Safe Work Australia.
Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

3. Composition/information on ingredients

Ingredients

Name	CAS	Proportion
Aluminium (This	7429-90-5	100 %

4. First-aid measures

Inhalation	No specific measures
Ingestion	No specific measures Give a glass of water to drink. If a large object has been swallowed, seek medical assistance.
Skin	Wash with plenty of soap and water.
Eye contact	Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	Not expected to form combustion products in present form, however metal dust may form aluminium oxides.
Specific Methods	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.

6. Accidental release measures

Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

7. Handling and storage

Precautions for Safe Handling	No specific measures
Conditions for safe storage, including any incompatibilities	Store in tightly closed containers, in a cool, dry, well-ventilated area away from incompatible substances. Keep away from acid fumes or ammonia fumes, acids, alkalies, halogenated compounds, oxidizers, combustible materials. Keep away from heat and flame. Keep well closed and protected from direct sunlight and moisture. Air and moisture sensitive. Should be periodically inspected and monitored.
Corrosiveness	Aluminium is highly resistant to corrosion, since it develops a thin film of aluminium oxide when exposed to air. In a study of the reaction of aluminium powder with water at 100-110 °C in the presence of various salts, it was found that pH values above 9.5 increased the rate of hydrogen evolution. Not corrosive to metals. Aluminium is strongly electropositive so that it corrodes rapidly in contact with other metals.
Storage Temperatures	Store at room temperature (15 to 25 °C recommended).

8. Exposure controls/personal protection

Other Exposure Information	A time weighted average (TWA) has been established for Aluminium (metal dust) (Safe Work Australia) of 10 mg/m³, and for Aluminium (welding fumes) (as Al) (Safe Work Australia) of 5 mg/m³. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.
Appropriate engineering controls	Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Not normally required.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	Silvery-white, malleable, ductile granules, sheet or turnings.
Melting Point	660 °C
Boiling Point	2460 °C
Solubility in Water	Insoluble.
Solubility in Organic Solvents	Insoluble in most organic solvents. Soluble in alkalis, sulfuric acid and hydrochloric acid (forms soluble salts). Insoluble in hot acetic acid and concentrated nitric acid.
Specific Gravity	2.7 at 25 °C
Vapour Pressure	Extremely low at 25 °C; 0.133 kPa (1 mm Hg) at 1284 °C.
Volatile Component	0 %vol @ 21 °C
Surface Tension	860 mN/m (860 dynes/cm) at 700-750 °C (molten aluminium).
Flammability	Non combustible material. This material is flammable in powder form only.
Auto-Ignition Temperature	760 °C
Explosion Properties	Halogen acids and sodium hydroxide in contact with aluminium may generate explosive mixtures of hydrogen. Finely divided aluminium such as small chips and fines, and dusts, at sufficient concentrations, can form explosive mixtures in air. It will also form explosive mixtures in air in the presence of bromates, iodates, or ammonium nitrate.
Molecular Weight	26.98
Dynamic Viscosity	1-1.2 mPa.s (1-1.2 centipoises) at 700-750 °C (molten aluminium).
Other Information	Electrical Resistivity: 2.42 x 10(-8) ohms.m at O °C; 2.65 x 10(-8) ohms.m at 20 °C.

10. Stability and reactivity

Chemical Stability	Stable under ordinary conditions of use and storage.
Conditions to Avoid	Incompatible materials, exposure to air, moist air or water, generation of dust, heat, sparks, flames or other sources of ignition.
Incompatible Materials	Oxidizing agents (e.g. dinitrogen tetroxide, bromates, chlorates, iodates, sodium peroxide); heating + antimony, phosphorous, arsenic, sulfur, or selenium; heating + metal oxides, oxosalts, or sulfides (e.g iron, copper or lead oxides, nitrates, sulfates); ammonium nitrate; acids; ammonium persulfate and water; halogenated hydrocarbons; silver chloride; sodium carbonate; fluorochloro-lubricants; halogens; interhalogens; nitro compounds and water; non-metal halides (e.g. phosphorous pentoxide); nitrous oxide; nitrogen tetroxide; nitric oxide; nitrogen peroxide; sulfur dioxide; sulfur dichloride; phosgene; diborane + air; water; strong bases and alcohols; hydrocarbons, with or without oxidizing agents; chromic anhydride; acids; performic acid; other metals; orthodichlorobenzene + ethylene dichloride + propylene dichloride; refined propylene dichloride + heat; potassium perchlorate; liquid oxygen.
Possibility of hazardous reactions	Aluminium powder or dust can react violently or explosively with oxidizing agents (e.g. dinitrogen tetroxide, bromates, chlorates, sodium peroxide). Explosion of the reacted mixture may be triggered by heat, striking, banging or light friction. Powdered aluminium reacts violently on heating with antimony, arsenic, phosphorous, sulfur or selenium. Aluminium powder or metal may undergo violent or explosive reactions ('thermite' reaction) on heating with metal oxides, oxosalts or sulfides (e.g copper or lead oxides, nitrates, sulfates). An explosion may occur when aluminium powder or dust is mixed with ammonium nitrate, ammonium persulfate and water, halogenated hydrocarbons, silver chloride, sodium carbonate, or fluorochloro-lubricants. Aluminium dust when heated is ignitable and explosive in carbon dioxide atmospheres. Violent explosions my occur with aluminium metal and halogenated hydrocarbons, due to the formation of aluminium chloride, which catalyses further decomposition.

	Mixtures of aluminium powder with halogens, interhalogens, nitro compounds and water can ignite. Aluminium ignites in non-metal halides (e.g. phosphorous pentoxide) and in the vapours of carbon disulfide, nitrous oxide, nitrogen tetroxide, phosgene or sulfur dioxide. Aluminium and diborane react spontaneously to form complex hydrides which ignite in air. Aluminium powder reacts with water, strong acids, strong bases or alcohols to release flammable hydrogen gas. Finely divided aluminium such as small chips and fines, will form explosive mixtures in air.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	May cause irritation of the digestive tract. Acute aluminium toxicity is unlikely.
Inhalation	Not expected to be an inhalation hazard unless it is reacted to form metallic salts, heated to produce fumes upon decomposition, or if aluminium dust is present. If heated or in dust form, it may cause respiratory tract and lung irritation. Inhalation of finely divided powder has been reported as a cause of pulmonary fibrosis.
Skin	May cause mechanical damage (sharp edges may scratch). Dust may cause skin irritation.
Eye	Dust may cause mechanical irritation. Physical damage may occur due to entry of a solid foreign object.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Not classified based on available information.
Chronic Effects	Repeated or prolonged exposure to large amounts of aluminium compounds may cause chronic renal failure (mostly due to the high aluminium content of the water for the dialysate used for dialysis in the 1970's, or chronic ingestion of aluminium-containing phosphate binders or antacids), lung disorders (mostly due to exposure to aluminium fumes or dust in the workplace), phosphate deficiency, Aluminium Related Bone Disease or aluminium-induced Osteomalacia (softening and bending of the bones) with fracturing Osteodystrophy, microcytic anaemia, weakness, fatigue, visual and auditory hallucinations, memory loss, speech and language impairment, epileptic seizures, motor disturbance, and dementia, and altered EEG, and may possibly be linked to Alzheimer's disease or other neurological diseases, elevated aluminium levels in the brain, neurological diseases and impaired co-ordination. Contact dermatitis occurs rarely after aluminium exposure.
Serious eye damage/irritation	Not classified based on available information.
Skin corrosion/irritation	Not classified based on available information.

12. Ecological information

Ecological Information	No ecological problems are to be expected when the product is handled and used with due care and attention.
Ecotoxicity	Quantitative data on the ecological effect of this product are not available. No ecological data available for this product.

Infosafe No™ 1CHCU Issue Date :November 2021 RE-ISSUED by CHEMSUPP

Product Name **ALUMINIUM Sheet**

Not classified as hazardous

13. Disposal considerations

Disposal Considerations Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14. Transport information

15. Regulatory information

Regulatory Information All the constituents of this product are listed on the Australian Inventory of Chemical Substances (AICS), or exempted. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Poisons Schedule Not Scheduled

16. Other Information

Literature References

'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'.
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.
Safe Work Australia, 'Hazardous Chemical Information System'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:
All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. ChemSupply Australia Pty Ltd accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.

Empirical Formula & Structural Formula Al.

...End Of MSDS...