



SAFETY DATA SHEET ALUMINIUM TRIHYDRATE REVISION 5, DATE 31 JAN 23

1. IDENTIFICATION

Product Name	Aluminium Trihydrate
Other Names	Alumina hydrate; Amorphous alumina; ATH; Hydrated alumina
Uses	Industrial chemicals; Paper (filler, coating); Glass; Filler (rubber, plastics, carpet backing); Porcelain (setting sand, enamel, frit, pigment, ceramics); Fire retardant.
Chemical Family	No Data Available
Chemical Formula	Al(OH) ₃
Chemical Name	Aluminium hydroxide
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Not Scheduled

Redox Ltd
Corporate Office Sydney
Locked Bag 15 Minto NSW 2566 Australia
2 Swettenham Road Minto NSW 2566 Australia
All Deliveries: 4 Holmes Road Minto NSW 2566 Australia

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Web www.redox.com
ABN 92 000 762 345

Australia
Adelaide
Brisbane
Melbourne
Perth
Sydney

New Zealand
Auckland
Christchurch
Hawke's Bay
UK
London

Malaysia
Kuala Lumpur
USA
Los Angeles
Oakland
Mexico
Saltillo



Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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Safe Work Australia
National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification	NOT hazardous according to the criteria of Safe Work Australia under Model WHS Regulations
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Aluminium hydroxide	Al(OH)3	21645-51-2	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get medical advice/attention. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. *Most important symptoms and effects, both acute and delayed: Contact with eyes may cause irritation.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal.
Flammability Conditions	Non-combustible; Material itself does not burn.
Extinguishing Media	If material is involved in a fire, use extinguishing media appropriate to surrounding fire conditions.
Fire and Explosion Hazard	No information available.
Hazardous Products of Combustion	Fire or heat may produce irritating and/or toxic gases, including Aluminium oxide.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Collect material (sweep or vacuum up) and place into suitable containers for recovery or disposal (see SECTION 13).
Containment	Stop leak if you can do it without risk. Prevent dust cloud. Prevent entry into waterways, sewers, basements or confined areas.
Decontamination	No information available.
Environmental Precautionary Measures	Prevent entry into drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight, Keep container tightly closed when not in use. Avoid exposure to air. Protect from moisture. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ ; TWA = 3 mg/m ³ (respirable dust).
Exposure Limits	No Data Available

Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	<ul style="list-style-type: none"> - Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/particulate filter respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields or goggles. - Hand protection: Handle with gloves. Recommended: Wear appropriate chemical resistant gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Normal working clothing (long sleeved shirts and long pants).
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Powder
Odour	Odourless
Colour	White
pH	No Data Available
Vapour Pressure	<10 Pa (@ 20 °C)
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	300 °C
Freezing Point	No Data Available
Solubility	Insoluble in water; Insoluble in alcohol - Soluble in hydrochloric acid & sulfuric acid
Specific Gravity	2.42 (Water = 1)
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.

Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material itself does not burn.
Reactions That Release Gases or Vapours	Fire or heat may produce irritating and/or toxic gases, including Aluminium oxide.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Avoid generating dust. Avoid exposure to air. Protect from moisture.
Materials to Avoid	Incompatible/reactive with acids, alkalis.
Hazardous Decomposition Products	Fire or heat may produce irritating and/or toxic gases, including Aluminium oxide.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on toxicological effects:</p> <ul style="list-style-type: none">- Acute toxicity: Not classified.- Skin corrosion/irritation: No adverse effect observed (not irritating) [ECHA].- Serious eye damage/irritation: No adverse effect observed (not irritating) [ECHA].- Respiratory/skin sensitisation: No adverse effect observed (not sensitising) [ECHA].- Germ cell mutagenicity: Did not show mutagenic effects in animal experiments. No adverse effect observed (negative) [ECHA].- Carcinogenicity: Does not contain any carcinogens or potential carcinogens (IARC, NTP, OSHA).- Reproductive toxicity: No information available.- STOT (single exposure): No adverse effect observed (not irritating) [ECHA].- STOT (repeated exposure): Not classified.- Aspiration toxicity: No information available. <p>Information on likely routes of exposure:</p> <ul style="list-style-type: none">- Ingestion: Low acute oral toxicity.- Eye contact: Contact with eyes may cause irritation. Irritation can be caused by mechanical abrasion.- Skin contact: Not expected to cause skin irritation in normal use conditions. Irritation can be caused by mechanical abrasion.- Inhalation: Not expected to cause respiratory irritation in normal use conditions. Inhalation of high concentrations of these nuisance inert particulates can cause a mild irritation of the respiratory tract. <p>Chronic effects: No information available.</p>
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	The material is not biodegradable.
Mobility	No information available.
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	Does not bioaccumulate.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	No information available.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name	Aluminium Trihydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	Aluminium Trihydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)

NZS5433

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Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)

US DOT

Proper Shipping Name	Aluminium Trihydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Aluminium Trihydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Aluminium Trihydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information

No Data Available

Poisons Schedule (Aust)

Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code

Not Hazardous

National/Regional Inventories

Australia (AIIIC)

Listed

Canada (DSL)

Listed

Canada (NDSL)

Not Determined

China (IECSC)

Listed

Europe (EINECS)

244-492-7

Europe (REACH)

Not Determined

Japan (ENCS/METI)

Listed 1-17

Korea (KECI)

Listed - KE-00980

Malaysia (EHS Register)

Not Determined

New Zealand (NZIoC)

Listed

Philippines (PICCS)

Listed

Switzerland (Giftliste 1)

Not Determined

Switzerland (Inventory of Notified Substances)

Not Determined

Taiwan (NCSR)

Listed

USA (TSCA)

Listed

16. OTHER INFORMATION

Related Product Codes

ALTRIG1000, ALTRIH0200, ALTRIH0201, ALTRIH0300, ALTRIH0301, ALTRIH0500, ALTRIH0703, ALTRIH0800, ALTRIH1000, ALTRIH1001, ALTRIH1002, ALTRIH1003, ALTRIH1004, ALTRIH1005, ALTRIH1100, ALTRIH1150, ALTRIH1160, ALTRIH1300, ALTRIH1600, ALTRIH1601, ALTRIH1900, ALTRIH2000, ALTRIH2001, ALTRIH2002, ALTRIH2500, ALTRIH2600, ALTRIH2710, ALTRIH2725, ALTRIH2900, ALTRIH3000, ALTRIH3001, ALTRIH3002, ALTRIH3030,

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ALTRIH3031, ALTRIH3100, ALTRIH3150, ALTRIH3200, ALTRIH3300, ALTRIH3301, ALTRIH3400, ALTRIH3500, ALTRIH3501, ALTRIH3502, ALTRIH3503, ALTRIH3600, ALTRIH4000, ALTRIH4050, ALTRIH4200, ALTRIH4500, ALTRIH5000, ALTRIH5050, ALTRIH5100, ALTRIH5200, ALTRIH5300, ALTRIH5500, ALTRIH6000, ALTRIH6100, ALTRIH6400, ALTRIH7000, ALTRIH7700, ALTRIH7800, ALTRIH8000, ALTRIH9010, ALTRIH9020

Revision	5
Revision Date	31 Jan 2023
Reason for Issue	Update sds
Key/Legend	<p>< Less Than</p> <p>> Greater Than</p> <p>AICS Australian Inventory of Chemical Substances</p> <p>atm Atmosphere</p> <p>CAS Chemical Abstracts Service (Registry Number)</p> <p>cm² Square Centimetres</p> <p>CO₂ Carbon Dioxide</p> <p>COD Chemical Oxygen Demand</p> <p>deg C (°C) Degrees Celcius</p> <p>EPA (New Zealand) Environmental Protection Authority of New Zealand</p> <p>deg F (°F) Degrees Farenheit</p> <p>g Grams</p> <p>g/cm³ Grams per Cubic Centimetre</p> <p>g/l Grams per Litre</p> <p>HSNO Hazardous Substance and New Organism</p> <p>IDLH Immediately Dangerous to Life and Health</p> <p>immiscible Liquids are insoluable in each other.</p> <p>inHg Inch of Mercury</p> <p>inH₂O Inch of Water</p> <p>K Kelvin</p> <p>kg Kilogram</p> <p>kg/m³ Kilograms per Cubic Metre</p> <p>lb Pound</p> <p>LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.</p> <p>LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.</p> <p>ltr or L Litre</p> <p>m³ Cubic Metre</p> <p>mbar Millibar</p> <p>mg Milligram</p> <p>mg/24H Milligrams per 24 Hours</p> <p>mg/kg Milligrams per Kilogram</p> <p>mg/m³ Milligrams per Cubic Metre</p> <p>Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.</p> <p>mm Millimetre</p> <p>mmH₂O Millimetres of Water</p> <p>mPa.s Millipascals per Second</p> <p>N/A Not Applicable</p> <p>NIOSH National Institute for Occupational Safety and Health</p> <p>NOHSC National Occupational Heath and Safety Commission</p> <p>OECD Organisation for Economic Co-operation and Development</p> <p>Oz Ounce</p> <p>PEL Permissible Exposure Limit</p> <p>Pa Pascal</p> <p>ppb Parts per Billion</p> <p>ppm Parts per Million</p> <p>ppm/2h Parts per Million per 2 Hours</p> <p>ppm/6h Parts per Million per 6 Hours</p> <p>psi Pounds per Square Inch</p> <p>R Rankine</p> <p>RCP Reciprocal Calculation Procedure</p> <p>STEL Short Term Exposure Limit</p> <p>TLV Threshold Limit Value</p> <p>tne Tonne</p> <p>TWA Time Weighted Average</p>

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight