

Active Mineral Desiccant (MD)

Protection Experts Australia

Chemwatch: **5154-65** Version No: **6.1.1.1**

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 1

Issue Date: **08/11/2019**Print Date: **08/11/2019**S.GHS.AUS.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	Active Mineral Desiccant (MD)
Synonyms	Esorb
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Desiccant.

Details of the supplier of the safety data sheet

Registered company name	Protection Experts Australia Absortech Asia Pacific Pte Ltd	
Address	13 Phiney Place Ingleburn NSW 2565 Australia	12 Tannery Road #05-01 HB Center 1 Singapore 347722 Singapore
Telephone	+61406936575	+65 6423 9271
Fax	+61280070526	+65 6423 9372
Website	www.pro-ex.com.au	http://www.absortech.com/
Email	sales@pro-ex.com.au	asiapacific@absortech.com

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

NON-HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	Not Applicable
Classification [1]	Not Applicable
Label elements	
Hazard pictogram(s)	Not Applicable
SIGNAL WORD	NOT APPLICABLE

Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

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Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
1344-28-1.	<60	aluminium oxide
14808-60-7.	>30	graded sand
10043-52-4	<10	calcium chloride

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	 If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If dust is inhaled, remove from contaminated area. Encourage patient to blow nose to ensure clear passage of breathing. If irritation or discomfort persists seek medical attention.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.			
Advice for firefighters	Advice for firefighters			
Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water courses. Use fire fighting procedures suitable for surrounding area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. 			
Fire/Explosion Hazard	 Non combustible. Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of: hydrogen chloride 			
HAZCHEM	Not Applicable			

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

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Minor Spills	 Remove all ignition sources. Clean up all spills immediately. Avoid contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Use dry clean up procedures and avoid generating dust. Place in a suitable, labelled container for waste disposal.
Major Spills	 Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact with the substance, by using protective equipment and dust respirator. Prevent spillage from entering drains, sewers or water courses.

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- ► Recover product wherever possible. Avoid generating dust.
- Sweep / shovel up.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

- Limit all unnecessary personal contact.
 - Wear protective clothing when risk of exposure occurs.
 - Use in a well-ventilated area.
- Safe handling
- ► When handling **DO NOT** eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Avoid physical damage to containers.Use good occupational work practice.
- · · · **J** · · · · · ·
- Other information
- Keep dry.Store under cover.
- ▶ Protect containers against physical damage.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container

- ► Polyethylene or polypropylene container.
- ▶ Check all containers are clearly labelled and free from leaks.

Storage incompatibility

lone knowr

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	aluminium oxide	Aluminium oxide	10 mg/m3	Not Available	Not Available	(a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.
Australia Exposure Standards	graded sand	Quartz (respirable dust)	0.1 mg/m3	Not Available	Not Available	See Silica -Crystalline
Australia Exposure Standards	graded sand	Silica - Crystalline: Quartz (respirable dust)	0.1 mg/m3	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
aluminium oxide	Aluminum oxide; (Alumina)	5.7 mg/m3	15 mg/m3	25 mg/m3
graded sand	Silica, crystalline-quartz; (Silicon dioxide)	0.075 mg/m3	33 mg/m3	200 mg/m3
calcium chloride	Calcium chloride dihydrate	16 mg/m3	170 mg/m3	1,100 mg/m3
calcium chloride	Calcium chloride	12 mg/m3	130 mg/m3	790 mg/m3
calcium chloride	Calcium chloride hydrate	13 mg/m3	140 mg/m3	850 mg/m3
calcium chloride	Calcium chloride hexahydrate	24 mg/m3	260 mg/m3	1,600 mg/m3

Ingredient	Original IDLH	Revised IDLH
aluminium oxide	Not Available	Not Available
graded sand	25 mg/m3 / 50 mg/m3	Not Available
calcium chloride	Not Available	Not Available

OCCUPATIONAL EXPOSURE BANDING

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
calcium chloride	E	≤ 0.01 mg/m³	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.		

Exposure controls

Appropriate engineering controls

General exhaust is adequate under normal operating conditions.

Personal protection









Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption

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	and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable.
Skin protection	See Hand protection below
Hands/feet protection	 Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber
Body protection	See Other protection below
Other protection	 Overalls. P.V.C. apron. Barrier cream. Skin cleansing cream. Eye wash unit.

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1 Air-line*	-	PAPR-P1
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

^{* -} Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

If inhalation risk above the TLV exists, wear approved dust respirator.

Use respirators with protection factors appropriate for the exposure level.

- ▶ Up to 5 X TLV, use valveless mask type; up to 10 X TLV, use 1/2 mask dust respirator
- ▶ Up to 50 X TLV, use full face dust respirator or demand type C air supplied respirator
- ▶ Up to 500 X TLV, use powered air-purifying dust respirator or a Type C pressure demand supplied-air respirator
- Over 500 X TLV wear full-face self-contained breathing apparatus with positive pressure mode or a combination respirator with a Type C positive pressure supplied-air full-face respirator and an auxiliary self-contained breathing apparatus operated in pressure demand or other positive pressure mode
- ▶ Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- Use approved positive flow mask if significant quantities of dust becomes airborne.
- ▶ Try to avoid creating dust conditions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Brownish-grey odourless spherical particles, slightly soluble in water.		
Physical state	Solid	Relative density (Water = 1)	800-950 kg/m3 bulk density
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water	Partly miscible	pH as a solution (1%)	7-8 (10% suspension)
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

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Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Generated dust may be discomforting	
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.	
Skin Contact	There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.	
Eye	There is some evidence to suggest that this material can cause eye irritation and damage in some persons.	
Chronic	Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron penetrating and remaining in the lung.	

Active Mineral Decisions (MD)	TOXICITY	IRRITATION
Active Mineral Desiccant (MD)	Not Available	Not Available
	TOXICITY	IRRITATION
aluminium oxide	Oral (rat) LD50: >2000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
		Skin: no adverse effect observed (not irritating) $^{[1]}$
	TOXICITY	IRRITATION
graded sand	Oral (rat) LD50: =500 mg/kg ^[2]	Not Available
	TOXICITY	IRRITATION
calcium chloride	dermal (rat) LD50: =2630 mg/kg ^[2]	Eye (unknown): severe* [ICI]
	Oral (rat) LD50: 1000 mg/kg ^[2]	Skin (unknown): moderate*
Legend:	Nalue obtained from Europe ECHA Registered Substances - Acson Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS - Register of Toxic Effect of Specified data extracted from RTFCS -	cute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise chemical Substances

For calcium:

CALCIUM CHLORIDE

Toxicity from calcium is not common, because the gastrointestinal tract normally limits the amount of calcium absorbed. Therefore, short-term intake of large amounts of calcium does not generally produce any ill effects aside from constipation and an increased risk of kidney stones. However, more severe toxicity can occur when excess calcium is ingested over long periods, or when calcium is combined with increased amounts of vitamin D, which increases calcium absorption. Calcium toxicity is also found sometimes after excessive administration of calcium via a vein. Toxicity shows as abnormal deposition of calcium in tissues and by elevated blood calcium levels. However, high blood calcium is often due to other causes, such as abnormally high amounts of parathyroid hormone (PTH). Usually, under these circumstances, bone density is lost, and the resulting high blood calcium can cause kidney stones and abdominal pain.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

ALUMINIUM OXIDE & GRADED SAND

No significant acute toxicological data identified in literature search.

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	X

Legend:

X - Data either not available or does not fill the criteria for classification

Data either not available of does not
 Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

TOXICITY					
Active Mineral Desiccant (MD)	ENDPOINT TE	ST DURATION (HR)	SPECIES	VALUE	SOURCE

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	Not Available	Not Available		Not Available		Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	S	PECIES	VALUI	Ē	SOURCE
	LC50	96	Fi	ish	0.001-	0.134mg/L	2
aluminium oxide	EC50	48	С	rustacea	0.7364	mg/L	2
	EC50	72	Al	lgae or other aquatic plants	0.001-	0.799mg/L	2
	NOEC	240	С	rustacea	0.001-	0.1002mg/L	2
	ENDPOINT	TEST DURATION (HR)		SPECIES		VALUE	SOURCE
graded sand	Not Available	Not Available		Not Available		Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)		SPECIES	VAL	UE	SOURCE
	LC50	96		Fish	=3m	ıg/L	1
	EC50	48	(Crustacea	1-62	?mg/L	2
calcium chloride	EC50	72	,	Algae or other aquatic plants	2-90	00mg/L	2
	BCFD	48	(Crustacea	0.08	32425mg/L	4
	EC20	72	,	Algae or other aquatic plants	1-m	g/L	2
	NOEC	48	(Crustacea	2-m	g/L	2
Legend:	V3.12 (QSAR) -	1. IUCLID Toxicity Data 2. Europe ECH Aquatic Toxicity Data (Estimated) 4. U apan) - Bioconcentration Data 7. METI	IS EPA, Ecot	tox database - Aquatic Toxicity Data	5. ECETOC A		

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

•	
Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal

- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- ► Consult State Land Waste Management Authority for disposal.
- ► Bury residue in an authorised landfill.
- ▶ Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

 ${\bf Sea\ transport\ (IMDG-Code\ /\ GGVSee):\ NOT\ REGULATED\ FOR\ TRANSPORT\ OF\ DANGEROUS\ GOODS}$

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

ALUMINIUM OXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS

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Australia Exposure Standards

GRADED SAND IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Inventory of Chemical Substances (AICS)

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

CALCIUM CHLORIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Inventory of Chemical Substances (AICS)

National Inventory Status

National Inventory	Status		
Australia - AICS	Yes		
Canada - DSL	Yes		
Canada - NDSL	No (aluminium oxide; calcium chloride; graded sand)		
China - IECSC	Yes		
Europe - EINEC / ELINCS / NLP	Yes		
Japan - ENCS	Yes		
Korea - KECI	Yes		
New Zealand - NZIoC	Yes		
Philippines - PICCS	Yes		
USA - TSCA	Yes		
Taiwan - TCSI	Yes		
Mexico - INSQ	Yes		
Vietnam - NCI	Yes		
Russia - ARIPS	Yes		
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)		

SECTION 16 OTHER INFORMATION

Revision Date	08/11/2019	
Initial Date	27/10/2014	

SDS Version Summary

Version	Issue Date	Sections Updated
5.1.1.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
6.1.1.1	08/11/2019	Synonyms, Name

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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