

CHEMICAL HOUSE®

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SAFETY DATA SHEET

Ref:ARMADILLO-D_GHS_SDS_v2_OCT22 Page 1 of 6

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

GHS IDENTIFIER	ARMADILLO D (Dustproof)
PRODUCT (MATERIAL) NAME	
OTHER NAMES	
PROPER SHIPPING NAME	
RECOMMENDED USE	Water based impregnation agent for mineral construction materials. Uses include: Strengthening crumbling natural stones, dustproofing & hardening porous concrete, and mortars, Can be used as sealer for brickwork.
SUPPLIER NAME/ADDRESS	CHEMISTRY HOUSE PTY LTD 9 Production Avenue Molendinar 4214 Queensland
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EMERGENCY PHONE NUMBER	000 Hours: 0800-1700 Monday-Friday

SECTION 2 HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION OF SUBSTANCE / MIXTURE Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; **NON DANGEROUS GOODS.**

HAZARD CATEGORY This material is hazardous according to Safe Work Australia; **HAZARDOUS SUBSTANCE**

POISON SCHEDULE S5 CAUTION

HAZARD CATEGORY Eye Damage/Irritation: Category 2A
Skin Corrosion/Irritation: Category 2

PICTOGRAMS



SIGNAL WORD

WARNING

HAZARD STATEMENTS

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H433 Harmful to terrestrial vertebrates.

PRECAUTIONARY STATEMENTS

GENERAL P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.

PREVENTION

P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

RESPONSE

P301+P312 **IF SWALLOWED:** Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P302+P352 **IF ON SKIN:** Wash with plenty of soap and water.
P321 Specific treatment (see First Aid Measures on the Safety Data Sheet).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing before re-use.

STORAGE	P390 Absorb spillage to prevent material damage.
DISPOSAL	P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

Chemical identity of ingredients	CAS Number(s) for ingredients	Proportion of ingredients	Hazard Codes
Silicic acid, potassium salt	1312-76-1	10-30%	H315; H319

If the sum of ingredients is less than 100%, the material consists of further ingredients determined not to be hazardous as listed in HCIS.

SECTION 4 FIRST AID MEASURES

For advice, contact a Poisons Information Centre (☎ Australia 131126; New Zealand 0800 764 766) or a doctor.

Inhalation: Move person to fresh air or well-ventilated area. Apply artificial respiration if subject not breathing.

Ingestion: Immediately rinse mouth with water. Repeat until product is thoroughly removed.
Give water to drink. DO NOT induce vomiting due to risk of further damage. If vomiting occurs give water to drink to further dilute the product. Get medical attention.

Eye contact: Contact the Poisons Information Centre.
Immediately rinse with plenty of water for at least 15 minutes. Eyelids to be held open. Urgently get medical assistance. Transport to hospital or medical centre.

Skin Contact: Immediately wash contaminated skin with plenty of water. Soaked clothing should be removed while under the safety shower and skin washed with running water for a minimum of 30 minutes. No attempt should be made to neutralise the alkali with acid solutions, as this could aggravate the burns. Get medical attention if health effects develop or persist.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Treat symptomatically - for exposure to highly alkaline, material.

SECTION 5 FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

SPECIFIC HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE: Non-combustible material.

SPECIAL PROTECTIVE PRECAUTIONS AND EQUIPMENT FOR FIRE FIGHTERS Non-combustible material. Contact with metals may liberate hydrogen gas which is extremely flammable. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

SECTION 6 ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES /ENVIRONMENTAL PRECAUTIONS: Isolate spill or leak area immediately. Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

PERSONAL PRECAUTIONS /PROTECTIVE EQUIPMENT /METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Neutralise with dilute acid.
Collect and seal in properly labelled containers or drums for disposal.

SECTION 7 HANDLING AND STORAGE


PRECAUTIONS FOR SAFE HANDLING Avoid skin and eye contact and breathing in vapour, mists and aerosols. Keep out of reach of children.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Store in a cool, dry, well ventilated place. Store away from incompatible materials described in Section 10. Store away from foodstuffs. Store between 0°C and 95°C.

Do not store in aluminium, aluminium alloys, brass, copper, copper alloys, zinc, galvanized iron or carbon steel containers.

Keep containers closed when not in use - check regularly for leaks.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS	No value assigned for this specific material by the SAFEWORX AUSTRALIA. However, supplier recommended Exposure Standard(s): Potassium silicate solutions: 8hr TWA = 5 mg/m ³ ; STEL = 5 mg/m ³ .
BIOLOGICAL LIMIT VALUES	
APPROPRIATE ENGINEERING CONTROLS:	Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Keep containers closed when not in use.
INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT (PPE):	<p>If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.</p> <p>The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.</p> <p>OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.</p> <div style="text-align: center;">  </div> <p>Wear overalls, chemical goggles and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.</p> <p>If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.</p>

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<u>Appearance:</u>	Clear to Hazy, medium viscosity liquid
<u>Colour</u>	Water-white
<u>Odour</u>	odourless
<u>Flammability:</u>	Not flammable
<u>Melting Point:</u>	Unknown
<u>Boiling Point:</u>	105-108°C
<u>Freezing Point:</u>	0°C (approx)
<u>Flash Point:</u>	NA
<u>Vapour Pressure:</u>	Data not available
<u>Solids:</u>	Data not available
<u>% VOC</u>	NIL
<u>Vapour Density</u>	Data not available
<u>Flammability Limits</u>	Not flammable
<u>Specific Gravity:</u>	1.15-1.20
<u>pH as supplied</u>	11-13
<u>Solubility in water</u>	Miscible with water.

SECTION 10 STABILITY AND REACTIVITY

Reactivity:	Reacts exothermically with acids.
Chemical stability	Stable in sealed containers. Absorbs carbon dioxide from the air, which results in the deposition of insoluble silica.
Possibility of hazardous reactions:	Contact with metals may evolve flammable hydrogen gas. Reacts exothermically with acids. May react with ammonium salts liberating ammonia.
Conditions to avoid	Avoid exposure to air.
Incompatible materials	Incompatible with strong acids, aluminium, copper, brass, bronze, zinc, tin and lead.
Hazardous decomposition products	If overheated: The solution will boil and irritating Potassium Silicate containing mists will be released.

SECTION 11 TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label.

Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

SYMPTOMS OF EXPOSURE

Ingestion: Swallowing can result in nausea, vomiting, diarrhoea, and abdominal pain.
 Eye Contact: An eye irritant.
 Skin Contact: Contact with skin will result in irritation.
 Inhalation: Breathing in mists or aerosols may produce respiratory irritation.
CHRONIC Repeated or prolonged skin contact may cause dermatitis.

Acute toxicity: for active ingredient Oral LD50 (rat): 1280-3200 mg/kg	Not expected to be toxic (Oral Tox Cat 4)
Skin corrosion/irritation:	Expected to be an irritant. (Cat 2A)
Serious eye damage/irritation:	Expected to be an irritant. (Cat 2)
Respiratory or skin sensitisation:	Not expected to be a sensitiser.
Germ cell mutagenicity:	Not expected to be mutagenic. Chemically similar Sodium Silicate was not mutagenic to the bacterium E. Coli when tested in a mutagenicity bioassay.
Carcinogenicity:	Not listed as carcinogenic according to IARC.
Reproductive toxicity:	Not expected to impair fertility.
Specific Target Organ Toxicity (STOT) – single exposure:	No data
Specific Target Organ Toxicity (STOT) – repeated exposure:	Frequent ingestion over extended periods of time of gram quantities of silicates is associated with the formation of kidney stones and other siliceous urinary calculi in humans.
Aspiration hazard:	Not expected to be a hazard.

Aggravated medical conditions caused by exposure

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY Avoid contaminating waterways. Soluble in water. Sinks and mixes with water.
 The ecotoxicity of Potassium Silicate has not been tested.
 The following data is reported for chemically similar Sodium Silicates on a 100% solids basis:

Acute toxicity:	Fish –	(Gambusia affinis) : 2320 ppm; 96hr
	Aquatic invertebrate –	(Daphnia magna) :247 ppm; 96hr
	Algae –	Data not available
	Microorganisms –	Data not available
Chronic toxicity:	Fish –	Data not available
	Aquatic invertebrate –	Data not available
	Algae –	Data not available
	Microorganisms –	Data not available

PERSISTENCE AND DEGRADABILITY This material is not persistent in aquatic systems but it's high pH when undiluted or unneutralised is acutely harmful to aquatic life. Diluted material rapidly depolymerises to yield dissolved silica in a form that is indistinguishable from natural dissolved silica. It does not contribute to BOD. This material does not bioaccumulate except in species that use silica as a structural material such as diatoms and siliceous sponges. Neither silica nor potassium will appreciable bioconcentrate up the food chain.

MOBILITY Expected to be mobile in soil. Diluted material rapidly depolymerises to yield dissolved silica in a form that is indistinguishable from natural dissolved silica.

ENVIRONMENTAL FATE (EXPOSURE)

BIOACCUMULATIVE POTENTIAL No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS AND CONTAINERS Refer to State Land Waste Management Authority. Empty containers must be decontaminated. Normally suitable for disposal at approved land waste site.

SECTION 14 TRANSPORT INFORMATION

<u>ROAD AND RAIL TRANSPORT</u>	
NOT classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; NON-DANGEROUS GOODS	
UN NUMBER	Not applicable
UN PROPER SHIPPING NAME	Not applicable
CLASS AND SUBSIDIARY RISK	Not applicable
PACKING GROUP	Not applicable
SPECIAL PRECAUTIONS FOR USER	Not applicable
HAZCHEM CODE	Not applicable
<u>MARINE TRANSPORT</u>	
Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.	
<u>AIR TRANSPORT</u>	
Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.	
SECTION 15 REGULATORY INFORMATION	
CLASSIFICATION:	This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.
CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:	Eye Damage/Irritation: Category 2A Skin Corrosion/Irritation: Category 2
HAZARD STATEMENT(S):	H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H433 Harmful to terrestrial vertebrates.
POISONS SCHEDULE (SUSMP):	5 CAUTION
AICS	All ingredients are on the Australian Inventory of Chemical Substances
<i>Additional national and/or international regulatory information.</i>	
SECTION 16 OTHER INFORMATION	
CONTACT PERSON/POINT	FOR EMERGENCIES ONLY CONTACT : Australia : 000
	POISONS INFORMATION CENTRE : Australia 131126
	: New Zealand 0800 764 766
Date of preparation or last revision of the SDS	7 October 2022
Prepared by	SDS Manager
<i>Additional information</i>	
<i>Key/legend to abbreviations and acronyms used in the SDS.</i>	
ADG	Australian Code for the Transport of Dangerous Goods by Road and Rail
ACGIH	American Conference of Governmental Industrial Hygienists
ASCC	Australian Safety and Compensation Council
ATE	Acute Toxicity Estimates
BEI®	Biological exposure indices (BEI) are values used for guidance to assess biological monitoring results. With respect to chemical exposure, biological monitoring is the measurement of the concentration of a chemical marker in a human biological media that indicates exposure. They are not developed for use as legal standards.
Carcinogen Category Number	1. Established human carcinogen 2. Probably human carcinogen 3. Substances suspected of having carcinogenic potential
Code AICS	Australian Inventory of Chemical Substances
CAS number	Chemical Abstracts Service Registry Number
EPG	Emergency Procedure Guide (superseded by IERG)
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
HCIS	The Hazardous Chemical Information System (HCIS) is a database of information on chemicals that have been classified in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). HCIS replaces the previous Hazardous Substance Information System (HSIS).
HSIS	HSIS is a database of information on substances classified in accordance with Australia's

	previous hazardous substance classification system, the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)].
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IERG	HB 76-2004 Dangerous goods - Initial Emergency Response Guide
IMDG	International Maritime Dangerous Goods. A uniform code for transport of dangerous goods at sea.
LEL	lower flammable (explosive) limits in air;
LD₅₀	Lethal Dose sufficient to kill 50% of test population
NIOSH	National Institute for Occupational Safety and Health The United States federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness.
NOAEL	No Observed Adverse Effect Level
NOEL	No Observable Effect Level
NOHSC	National Occupational Health and Safety Commission
NTP	National Toxicology Program (USA)
PEL	Permissible Exposure Limit
RTECS	Registry of Toxic Effects of Chemical Substances (Symyx Technologies')
TCLo	Toxic Concentration Low
TDLo	Toxic Dose Low : lowest dosage per unit of bodyweight (typically stated in milligrams per kilogram) of a substance known to have produced signs of toxicity in a particular animal species.
TLV	Threshold Limit Value (ACGIH):The time weighted average used to describe exposure which is harmless to most of the population when exposed 8 hours per day, 40 hours per week.
TWA	(Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
SAFework	Independent statutory agency with primary responsibility to improve occupational health and safety and workers' compensation arrangements across Australia.
STEL	(Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UEL	upper flammable (explosive) limits in air;
UN Number	United Nations Number
VOC	Volatile Organic Content - defined as : 'any chemical compound based on carbon chains or rings with a vapour pressure greater than 0.1mm of mercury (Hg) or 0.0135Kpa at 25°C. This definition excludes reactive diluents, which are designed to be chemically bound into the cured film. It also includes all constituents >0.5% by volume of formulation, which are organic compounds with a boiling point < 250°C.'
<i>Literature references.</i>	
<i>Sources for data.</i>	Safety Data Sheets from Suppliers Hazardous Chemical Information System (HCIS) - ASCC Australia (on-line) GHS (Globally Harmonised System of Substance Classification & Labelling) REACH (European Chemical Substance Information System) ADG Code Ed 7.7 SUSMP N° 37

DISCLAIMER:

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since CHEMISTRY HOUSE Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact CHEMISTRY HOUSE Pty Ltd at the contact details on page 1. CHEMISTRY HOUSE Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request. CHEMISTRY HOUSE Pty Ltd however makes no warranty whatsoever, expressed, implied or of merchantability regarding the accuracy of such data or the results to be obtained from the use thereof and assumes no responsibility for injury to buyer or third persons or for any damage to property, Buyer assumes all risks.