

Australian statement of hazardous nature : Classified as hazardous according to criteria of NOHSC

Section 1 - Identification

Product Name Silicon standard solution 1000ppm

Product Code AJA2622

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Recommended Use Laboratory chemicals.

Section 2 - Hazard(s) Identification

Classification under the National Occupational Health and Safety Commission (NOHSC), Australia

Classified as hazardous according to criteria of NOHSC

Physical hazards

No hazards identified

Health hazards

Skin Corrosion/irritation	Category 1 A Category 2
Serious Eye Damage/Eye Irritation	Category 1 Category 2
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 2
Reproductive Toxicity	Category 1A Category 1B Category 2
Specific target organ toxicity - (repeated exposure)	Category 1

Environmental hazards

Chronic aquatic toxicity	Category 3
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Label Elements



Exclamation Mark
Health Hazard



Corrosion

Signal Word Danger

Hazard Statements

H314 - Causes severe skin burns and eye damage
 H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H317 - May cause an allergic skin reaction
 H360 - May damage fertility or the unborn child
 H412 - Harmful to aquatic life with long lasting effects
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 H341 - Suspected of causing genetic defects if inhaled
 H372 - Causes damage to organs through prolonged or repeated exposure
 H361 - Suspected of damaging fertility or the unborn child

Precautionary Statements

P264 - Wash face, hands and any exposed skin thoroughly after handling
 P271 - Use only outdoors or in a well-ventilated area
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P201 - Obtain special instructions before use
 P202 - Do not handle until all safety precautions have been read and understood
 P280 - Wear eye protection/ face protection
 P270 - Do not eat, drink or smoke when using this product
 P285 - In case of inadequate ventilation wear respiratory protection
 P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
 P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a POISON CENTER or doctor/ physician
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P332 + P313 - If skin irritation occurs: Get medical advice/ attention
 P362 - Take off contaminated clothing and wash before reuse
 P308 + P313 - IF exposed or concerned: Get medical advice/ attention
 P304 + P341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing
 P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician
 P337 + P313 - If eye irritation persists: Get medical advice/ attention
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
 P403 - Store in a well-ventilated place
 P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

No information available

Section 3 - Composition and Information on Ingredients

Component	CAS-No	Weight %
Water	7732-18-5	Balance
Sodium metasilicate	6834-92-0	0.1-1

Section 4 - First Aid Measures**Inhalation**

Remove from exposure, lie down. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

Ingestion

Do not induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Call a physician immediately.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.
General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Protection of First-aiders	No special precautions required.
First Aid Facilities	Eyewash, safety shower and washroom.
Most important symptoms/effects	None reasonably foreseeable. Causes burns by all exposure routes. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
Notes to Physician	Treat symptomatically.

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

Section 6 - Accidental Release Measures

Emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental Precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage

Precautions for Safe Handling

Wear personal protective equipment. Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Do not ingest.

Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.
AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

Section 8 - Exposure Controls and Personal Protection

Exposure limits

AUS - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]
 Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] updated in August, 2005. Safe Work Australia **ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace. **UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement. **DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Exposure Controls

Engineering Measures

None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye Protection

Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Natural rubber	See manufacturers	-	AS/NZS 2161.1	(minimum requirement)
Nitrile rubber	recommendations			
Neoprene				
PVC				

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection

Long sleeved clothing

Respiratory Protection

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

Recommended Filter type: Recommended half mask:-

Particle filter Particulates filter conforming to EN 143 (or AUS/NZ equivalent)
 Particle filtering: EN149:2001 (or AUS/NZ equivalent)

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Colorless	
Physical State	Liquid	
Odor	No information available	
Odor Threshold	No data available	
pH	No information available	
Melting Point/Range	No data available °C / °F	
Softening Point	No data available	
Boiling Point/Range	No information available °C / °F	
Flash Point	Not applicable	Method - No information available
Evaporation Rate	No data available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Vapor Pressure	No data available	
Vapor Density	No data available	(Air = 1.0)
Specific Gravity / Density	No data available	
Bulk Density	Not applicable	Liquid
Water Solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	No data available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other information

Section 10 - Stability and Reactivity

Reactivity	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products, Excess heat.
Hazardous Decomposition Products	None under normal use conditions.
Hazardous Polymerization	Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Information on Toxicological Effects**Product Information****(a) acute toxicity;**

Oral	Based on available data, the classification criteria are not met
Dermal	Based on available data, the classification criteria are not met
Inhalation	Based on available data, the classification criteria are not met

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	LD50 > 90 mL/kg (Rat)		
Sodium metasilicate	LD50 = 1153 mg/kg (Rat)		

(b) skin corrosion/irritation; Category 1
A

(c) serious eye damage/irritation; Category 1
 (d) respiratory or skin sensitization;
 Respiratory Category 1
 Skin Sub-Category 1A

No information available

(e) germ cell mutagenicity; Category 2

(f) carcinogenicity; Category 1A

(g) reproductive toxicity; Category 1B
 (h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 2

Target Organs No information available.
 (j) aspiration hazard; No data available

Symptoms / effects, both acute and delayed Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Section 12 - Ecological Information

Ecotoxicity effects

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment. Contains a substance which is: Very toxic to aquatic organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Sodium metasilicate	LC50: = 210 mg/L, 96h (Brachydanio rerio) LC50: = 210 mg/L, 96h semi-static (Brachydanio rerio)	EC50: = 216 mg/L, 96h (Daphnia magna)		

Persistence and Degradability

Persistence

Soluble in water, Persistence is unlikely, based on information available.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulative Potential

Bioaccumulation is unlikely

Mobility

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility Highly mobile in soils

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion Potential

This product does not contain any known or suspected substance

Section 13 - Disposal Considerations

Waste from Residues / Unused Products

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

Other Information

Chemical wastes should be disposed through a licensed commercial waste collection service. Solutions with low pH-value must be neutralized before discharge. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not dispose of waste into sewer. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

Section 14 - Transport Information

IMDG/IMO

UN-No UN1760
Proper Shipping Name CORROSIVE LIQUID, N.O.S.
Technical Shipping Name contains Sodium silicate
Hazard Class 8
Packing Group III

ADG

UN-No UN1760
Proper Shipping Name CORROSIVE LIQUID, N.O.S.
Technical Shipping Name contains Sodium silicate
Hazard Class 8
Packing Group III

Component	Hazchem Code
Sodium metasilicate 6834-92-0 (0.1-1)	2X

IATA

UN-No UN1760
Proper Shipping Name CORROSIVE LIQUID, N.O.S.
Technical Shipping Name contains Sodium silicate
Hazard Class 8
Packing Group III

Environmental hazards No hazards identified
Special Precautions No special precautions required
Additional information None known

Section 15 - Regulatory Information

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

International Inventories

X = listed

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	KECL
Water	X	X	231-791-2	-	X	X	-	X	-	X	X
Sodium metasilicate	X	X	229-912-9	-	X	X	-	X	X	X	X

Standard for the Uniform Scheduling of Medicines and Poisons

Prohibition or notification/licensing requirements Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

Section 16 - Other Information

Legend

AICS - Australian Inventory of Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic

NZIoC - New Zealand Inventory of Chemicals
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japanese Existing and New Chemical Substances

Substances List

IECSC - Chinese Inventory of Existing Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**TWA** - Time Weighted Average**IARC** - International Agency for Research on Cancer**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association**MARPOL** - International Convention for the Prevention of Pollution from Ships**NZS 5433:2012** - Transport of Dangerous Goods on Land**LD50** - Lethal Dose 50%**EC50** - Effective Concentration 50%**WEL** - Workplace Exposure Limit**DNEL** - Derived No Effect Level**POW** - Partition coefficient Octanol:Water**vPvB** - very Persistent, very Bioaccumulative**VOC** - Volatile Organic Compounds**KECL** - Korean Existing and Evaluated Chemical Substances**CAS** - Chemical Abstracts Service**ACGIH** - American Conference of Governmental Industrial Hygienists**PNEC** - Predicted No Effect Concentration**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code**ADG** Australian Code for the Transport of Dangerous Goods by Road and Rail**OECD** - Organisation for Economic Co-operation and Development**LC50** - Lethal Concentration 50%**ATE** - Acute Toxicity Estimate**RPE** - Respiratory Protective Equipment**NOEC** - No Observed Effect Concentration**BCF** - Bioconcentration factor**PBT** - Persistent, Bioaccumulative, Toxic**Key literature references and sources for data**

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**Physical hazards** On basis of test data**Health Hazards** Calculation method**Environmental hazards** Calculation method**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Revision Date 08-Dec-2015**Revision Summary** Update to Format.**This safety data sheet complies with the requirements of Safe Work Australia WHS Regulation****Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet