SAFETY DATA SHEET

S-1300 Pene-Krete

HYDROGEL CONCRETE SOLUTIONS

SECTION 1 – Identification: Product identifier and chemical identity

Product Identifier	Curing Aid / Anti Dusting / Hardener / Moisture Barrier
Supplier Name	Hydrogel Concrete Solutions
Supplier Address	13 Insight Circuit, Carrum Downs 3201
Supplier Contact Number	1800 860 448
Other means of Identification	Not Applicable
Recommended use of the Chemical and Restrictions on Use	Integral Sealer for concrete. Use in accordance with manufacturer's instructions.
Emergency Phone Number	Poisons Information Centre 13 11 26

SECTION 2 – Hazard(s) identification

GHS Classification	NON-HAZARDOUS SUBSTANCE OR MIXTURE according to the GHS.	
	NON-DANGEROUS GOODS according to the ADG Code.	
Label Elements	Not Applicable	
Precautionary Statement(s)	Clear to hazy, colourless, odourless, thick liquid. May cause severe eye burns. May cause eye, skin, and digestive tract irritation. Spray mist causes irritation to respiratory tract. Spills are slippery. High pH is harmful to aquatic life. Reacts with acids, ammonium salts, reactive metals and some organics. Non-combustible, but flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, tin, lead, and zinc. Prolonged or repeated skin contact may cause	
General:	dry skin. Defatting of the skin can result in irritation and dermatitis (inflammation of the skin).	
Prevention:	Refer to Section 7 and 8.	
Response:	Refer to Section 4, 5 and 6.	
Storage:	Refer to Section 7.	
Disposal:	Refer to Section 13.	

SECTION 3 – Composition and information on ingredients

Cas No	% [Weight] Name	
	Not Spec	nonhazardous proprietary
7732-18-5	Not Spec	water

SECTION 4 – First-aid measures

Description of Nec	essary First Aid Measures
Inhalation	 If fumes or combustion products are inhaled; Removed from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital or doctor.
Skin Contact	 If skin or hair contact occurs; Seek medical attention 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 neutralize the alkali with acid solutions, as this could aggravate the burns. Get medical attention if health effects develop or persist.

Eye Contact	 If this product comes in contact with the eyes; Wash out immediately with fresh running water for at least 15 minutes. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting up 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 a skilled person.
Ingestion	 If this product is ingested; If swallowed DO NOT induce vomiting If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice
Symptoms Caused by	Swallowing can result in nausea, vomiting, abdominal pain and diarrhoea. May cause severe irritation
Exposure	 to the mouth, throat and stomach. A severe eye irritant. May cause conjunctivitis (inflammation of the eyes) and possibly corneal burns and ulceration. Irritating to skin. May cause itching and skin rash. Exposure to vapours at room temperature is an unlikely route of exposure due to its low vapour pressure. Spray mist will cause respiratory irritation and may result in coughing as well as inflammation of nose, throat and windpipe.
Medical Attention and Special Treatment	Treat symptomatically as for strong alkalis.

SECTION 5 – Fire-fighting measures

Suitable Extinguishing Media	Compatible with dry chemical water spray, regular foam and carbon dioxide fire extinguishing media.
Specific Hazards Arising from the Chemical	 Aqueous solution, not flammable under normal conditions of use. Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, tin, lead, and zinc. Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, tin, lead, and zinc.
Special Protective Equipment and Precautions for Fire Fighters	 Alert Fire Brigade and tell them the location and nature of the hazard. Wear breathing apparatus plus protective gloves in the event of a fire. Fire fighters to wear full protective clothing. Chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots. Prevent, by any means available, spillage from entering drains or water courses. Use firefighting 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. Equipment should be thoroughly decontaminated after use. Heat may cause expansion or decomposition with violent rupture of containers. Decomposes on heating and may produce toxic fumes of carbon monoxide (CO). May emit acrid smoke. Other decomposition products include: carbo dioxide (CO2).

SECTION 6 – Accidental release measures

Minor Spills	- Clea	n up all spills immediately.		
·				
	- Con	- Control personal contact with the substance, by using protective equipment.		
	- Con	- Contain and absorb spill with sand, earth, inert material or vermiculite.		
	- Wip	e up.		
	Place in a	suitable, labelled container for waste disposal.		
	- Spil	ed material is very slippery. Only water will evaporate fr	rom a spill of this material. Dries to	
	forr	n glass film which can easily cut skin. Sinks and mixes wi	th water.	
Date of Preparatio	on: 26/05/2020	Date of Previous Issue: No Previous Issue	Version: 1	

Major Spills	Minor hazard.
	- Clear area of personnel.
	 Alert Fire Brigade and tell them location and nature of hazard.
	- Control personal contact with the substance, by using protective equipment as required.
	 Prevent spillage from entering drains or water ways.
	- Do not touch or walk through spilled material
	- Contain spill with sand, earth or vermiculite.
	 Collect recoverable product into labelled containers for recycling.
	- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for
	disposal.
	 Wash area and prevent runoff into drains or waterways.
	If contamination of drains or waterway occurs, advise emergency services.
Environmental	 Prevent spillage from entering drains or water ways.
Precautions	 High pH of this material is harmful to aquatic life.
	- Contain spill with sand, earth or vermiculite.
	 Collect recoverable product into labelled containers for recycling.
	- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for
	disposal.
	 Wash area and prevent runoff into drains or waterways.
	If contamination of drains or waterway occurs, advise emergency services
Methods and Materials	- Bunding
for Containment and	- Covering of drains
Cleaning up	- Emergency response spill kit

SECTION 7 – Handling and storage, including how the chemical may be safely used

Precautions for Safe	- Limit all unnecessary personal contact.
Handling	- Wear protective clothing when risk of exposure occurs.
	 Avoid contact with eyes, skin and clothing.
	 Avoid breathing spray mist.
	- Keep container closed.
	- Promptly clean residue from clothes with cloth.
	- Use in a well- ventilated area.
	- 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.
	 Observe manufacturer's storage and handling recommendations contained within this SDS.
Other Information	- Store in original containers.
	- Keep containers securely sealed.
	- Store in a cool, dry, well-ventilated area.
	- Store away from incompatible materials and foodstuff containers.
	 Protect containers against physical damage and check regularly for leaks.
	 Observe manufacturer's storage and handling recommendations contained within this SDS.
	- Store out of direct sunlight.
	- Do not freeze, store between 5°C-38°C
Conditions for Safe Stora	ge, including any Incompatibilities
Suitable Container	- Lined metal can, lined metal pail/can.
	- Plastic pail
	- Polyline drum.
	 Packing as recommended by manufacturer.
	- Check all containers are clearly labelled and free from leaks.
	- Keep containers closed at all times.
	- Mild steel is the most suitable material of construction for drums, tanks, valves, pipe-work, etc.
	Concrete storage tanks can be used but must be strong enough to hold the weight of Silicate
	solution to be stored and thick enough to prevent seepage of water
Storage incompatibility	- Separate from acids, reactive metals, and ammonium salts. Storage temperature 0-95°C. Loading
	temperature 45-95°C. Do not store in aluminium, fiberglass, copper, brass, zinc or galvanized
	containers.

SECTION 8 – Exposure controls and personal protection

Control Parar	neters – Exposure Standards, Biological Monitoring	Not a	vailable	
Appropriate	Engineering controls are used to remove a hazard or place a l			
Engineering	designed engineering controls can be highly effective in protecting workers and will typically be independent of			
Controls				
	Process controls which involve changing the way job activity or process is done to reduce the risk.			
	Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker			
	and ventilation that strategically "adds" and "removes" the a			
	remove or dilute an air contaminant if designed properly. Th			
	particular process and chemical or contaminant in use. Empl	-	-	
	prevent employee overexposure.			
	General exhaust is adequate under normal operating condition	ons. If risk of overex	posure exists, wear SAA approved	
	respirator. Correct fit is essential to obtain adequate protect	ion. Provide adequa	te ventilation in warehouse or	
	closed storage areas. Air contaminants generated in the wor	kplace possesses var	rying "escape" velocities which, in	
	turn, determine the "capture velocities" of fresh circulating a	ir required to effecti	vely remove the contaminant.	
	Type of Contaminant		Air Speed	
	Solvent, vapours, degreasing etc. evaporating from tank (in	· · ·	0.25-0.5 m/s (50-100 f/min)	
	Aerosols, fumes from pouring operations, intermittent cont	•	0.5-1 m/s (100-200 f/m)	
	speed conveyor transfers, welding, spray drift, plating acid f	umes, pickling		
	(released at low velocity into zone of active generation)			
	Direct spray, spray painting in shallow booths, drum filling, o		1-2.5 m/s (200-500 f/min)	
	crusher dusts, gas discharge (active generation into zone of			
	Grinding, abrasive blasting, tumbling, high speed wheel gen		2.5-10 m/s (500-2000 f/min)	
	(released at high initial velocity into zone of very high rapid	air motion)		
	Within each range the appropriate action depends on:	1		
	Lower End of the Range	Upper End of the I		
	1. Room air currents minimal or favourable to capture	1. Disturbing roor		
	2. Contaminants of low toxicity or of nuisance value only	2. Contaminants of		
	3. Intermittent, low production	3. High production	-	
	4. Large hood or large air mass in motion	4. Small hood – lo	cal control only	
	Simple theory shows that air velocity falls rapidly with distance	re away from the on	ening of a simple extraction nine	
	Velocity generally decreases with the square of distance from			
	air speed at the extraction point should be adjusted, accordin			
	contaminating source. The air velocity at the extraction fan, t			
	400 f/min) for extraction of solvents generated in a tank 2 me			
			-	
	mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.			
Personal	theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.			
Protective	Follow normal indu	strial safety practice	s. The use of protective	
Equipment	clothing and equipr	nent depends on the	e degree and nature of exposure	
(PPE)				
Eye and	Avoid eye and fact contact			
face	Avoid inhaling the vapour or mist			
Protection	Respiratory protection is not normally required due to low inhalation risk.			
	Safety glasses, chemical goggles or face shield as appropriate.			
	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 indicate a review of lens absorption and adsorption for the class of chemicals in use and account of injury			
	experience. Medical and first aid personnel should be trained	d in the removal and	suitable equipment.	
Skin	Avoid skin contact			
Protection	See hand protection below.			
Hands/Feet	Wear chemical protective gloves e.g PVC.			
Protection	Wear chemical resistant safety footwear			
Body Protection	Overalls, splash apron or similar protective apparel.			

Other	Eyewash unit. Wash contaminated clothing and protective equipment before storing and re-using. The use of
Protection	barrier cream is recommended.
Thermal	Not available
Hazards	

SECTION 9 – Physical and chemical properties

Appearance	Clear to hazy and colourless	Relative Density (water =1)	1.0-1.2
Odour	Odourless liquid	Solubility(ies)	Soluble in water
Odour Threshold	Not available	Partition Coefficient: N octanol/water	log P(octanol/water) – Not available
pH (of the concentrate)	11-13	Auto-ignition Temperature	Not applicable to aqueous solutions
Melting Point/Freezing Point	0°C (melting point)	Decomposition Temperature	Water Boils off at 100°C
Boiling Point and Boiling Range	Water Boils off at 100°C	Viscosity	
Flash Point	Not applicable to aqueous solutions	Specific Heat Value	Not applicable
Evaporation Rate	Not available	Particle Size	Not available
Flammability	Non-combustible liquid. The aqueous solution is not flammable under normal conditions of use. Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, tin, lead, and zinc.	Volatile Organic Compounds Content	Not available
Upper/Lower Flammability or Explosive Limits	Not applicable to aqueous solutions	% Volatile	80-95%
Vapour Pressure	Not determined	Saturated Vapour Concentration	Not available
Vapour Density	Not applicable	Release of Invisible Flammable Vapours and Gases	Not available
		Corrosiveness	Some corrosive effects on Aluminium, Copper, Tin, Zinc, Lead etc

Additional Parameters

Shape and Aspect Ratio	Not applicable	Degree or Aggregation or Agglomeration	Not available
Crystallinity	Not available	Ionisation (redox potential)	Not available
Dustiness	Not applicable	Bio durability or Bio persistence	Not available
Surface Area	Not available		

SECTION 10 – Stability and reactivity

Reactivity	Flammable hydrogen gas will form on reaction with aluminium, copper, zinc, etc. Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas.	
Chemical Stability	Stable in sealed containers. Absorbs Carbon Dioxide on exposure to air, which results in the deposition of Insoluble Silica.	
Conditions to Avoid	Leaving solutions exposed to carbon dioxide in the air.	
Incompatible Materials and Possible Hazardous Reactions	Strong Acids. Silicate Solutions are strongly alkaline and are not compatible with aluminium, copper, brass, bronze, zinc, tin and lead. Can etch glass if not promptly removed.	
Hazardous Decomposition Products	If Overheated: The solution will boil and irritating Silicate containing mists will be released.	

SECTION 11 – Toxicological information

Information on Routes of Exposure

Ingestion & Inhalation	Acute Oral Toxicity LD50 (rat) – Not Determined: The acute oral toxicity of this product has not been tested. When chemically similar Silicates were tested on a 100% solids basis, their single dose acute oral LD50 in rats ranged from 1280 mg/kg to 3200 mg/kg. The acute oral lethality resulted from nonspecific causes. The product contains 5-35% Silicate thus each product is estimated to have an				
Skin Contact	Acute Oral Toxicity LD50 (rat): >2000 mg/kg. Irritant: When tested for primary skin irritation potential, similar Silicate solution produced no irritation to intact skin, but well-defined irritation to abraded skin. Human experience confirms that irritation occurs when this material gets on clothes at the collar, cuffs or other areas where abrasion may occur.				
Еуе	Severe Irritant: This material has not been tested for primary eye irritation. However, on the basis of its similarity to Silicate Solutions in composition and alkalinity it is regarded as a severe eye irritant.				
Symptoms Related to Exposure	Swallowing can result in nausea, vomiti to the mouth, throat and stomach. A severe eye irritant. May cause conjur and ulceration. Irritating to skin. May cause itching and Exposure to vapours at room temperate pressure. Spray mist will cause respiratory irritati throat and windpipe	nctivitis (inflammati d skin rash. ure is an unlikely ro	on of the eye ute of exposi	es) and poss	ibly corneal burn s low vapour
Numerical Means of Toxicity	Not available				
Immediate, Delayed and Chronic Health Effects from Exposure	Sub chronic Data: The sub chronic toxic chemically similar Silicate in drinking wa were reported in the blood chemistry o animals due to Silicate administration w reported adverse effects to the kidneys whereas rats fed the same dosage did r of births and survival to weaning was re 1200 ppm. Special Studies: The mutagenic potenti Silicate was not mutagenic to the bacter no known reports of carcinogenicity of gram quantities of silicates is associated calculi in humans. Silicate is not listed b	ater for three month f some animals, but vere observed in an of dogs fed Silicate not develop any trea ported for rats fed al of this material ha rium E. Coli when te Silicates. Frequent i d with the formation y IARC, NTP or OSH	ns, at 200, 60 c no specific o y of the dosa in their diet atment-relate Silicate in the as not been t ested in a mu ngestion ove n kidney ston A as a carcino	0 and 1800 changes to t ge groups. / at 2.4g/kg/c ed effects. D eir drinking ested. Cher tagenicity b r extended es and othe ogen	ppm, changes he organs of the Another study day for 4 weeks, becreased number water at 600 and nically similar bioassay. There an periods of time of er siliceous urinar
Exposure Levels	No exposure standards have been (Safe Work Australia).		e ingredients	- I	
	SUBSTANCE	TWA		STEL	
	Silicato Solution	ppm	mg/m3	ppm	mg/m3
	Silicate Solution	-	5		5
	contamination should be minimised. Us		0 1		•
Interactive Effects	Not available			0 0	
Data Limitations	Not available				

SECTION 12 – Ecological information

Ecotoxicity	Avoid contaminating waterways. Soluble in water. Sinks and mixes with water. Only water will evaporate from this material. The ecotoxicity of Silicate Solution has not been tested. The following data is reported for chemically similar
	Silicates on a 100% solids basis: A 96-hour median tolerance for fish (Gambusia affnis) of 2320 ppm; a 96 hour median tolerance for water fleas (Daphnia magna) of 247 ppm; a 96 hour median tolerance for snail eggs (Lymnea) of 632 ppm; and a 96 hour median tolerance for Amphipoda of 160 ppm. The product contains 5-35% Silicate.
Persistence and Degradability	This material is not persistent in aquatic systems, but its high pH when undiluted or unnaturalised is acutely harmful to aquatic life. Diluted material rapidly depolymerizes to yield dissolved silica in a form that is indistinguishable from natural dissolved silica. It does not contribute to BOD. This material does not bio accumulate except in species that use silica as a structural material such as diatoms and siliceous sponges. Neither silica nor will appreciably bio concentrate up the food chain.

Bio accumulative	Not available
Potential	
Mobility in Soil	Expected to be mobile in soil. Diluted material rapidly depolymerizes to yield dissolved silica in a form that is indistinguishable from natural dissolved silica
Other Adverse Effects	Not available

SECTION 13 – Disposal considerations

Safe Handling and Disposal Methods	 Treat and neutralise with dilute acid at an effluent treatment plant. Wear PPE as advised in Section 8.
Disposal of any Contaminated Packaging	 Recycle wherever possible or consult manufacturer for recycling options. Normally suitable for disposal at approved land waste site after dilution or neutralisation. Recycle containers, otherwise dispose of in an authorised landfill.
Environmental Regulations	 Consult State Land Waste Management Authority for Disposal. Not suitable for incineration.

SECTION 14 – Transport information

UN Number	Not Classed as an ADG according to the ADG Code
Proper Shipping Name	Not Applicable
Transport Hazard Class(es)	Not Applicable
Packing Group	Not Applicable
Environmental Hazards	Not Applicable
Special Precautions During	Not Applicable
Transport	
Hazchem Code	Not Applicable

SECTION 15 – Regulatory information

Safety, Health and Environmental Regulations,	Consult Commonwealth, State or Territory legislation for further requirements.	
Specific for the Product in	Where applicable refer to the following Standards:	
Question	AS/NZS 1337 Eye protectors for industrial applications	
	AS 2161 Industrial safety gloves and mittens	
	AS 2210 Safety footwear	
	AS 3765 Clothing for protection against hazardous chemicals.	
	Hazard Category – Irritant	
	R36/38: Irritating to eyes and skin.	
	S24/25: Avoid contact with skin and eyes.	
	S37/39: Wear suitable gloves and eye/face protection.	
	S26: In case of contact with eyes, rinse immediately with plenty of water	
	and seek medical advice.	
	S28: After contact with skin, wash immediately with plenty of water.	
NICNAS – AICS:	All ingredients are on the Australian Inventory of Chemical Substances.	
Aust. Pesticides &	Not applicable	
Veterinary Medicine		
Authority:		
Therapeutic Goods	Not applicable	
Administration:		
Food Standards Australian &	Not applicable	
New Zealand:		

SECTION 16 – Any other relevant information

Date of Preparation	26 May 2018
Key Abbreviations or Acronyms Used	Not Applicable

The information contained within this SDS details health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user of this product should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further

information is needed to ensure that an appropriate risk assessment can be made, the user should contact Hydrogel Concrete Solutions.

Hydrogel Concrete Solutions makes no representation as to the completeness and accuracy of the data contained in this data sheet. It is the user's obligation to evaluate and use this product safely, and to comply with all relevant Federal, State and Local Government laws and regulations. Hydrogel Concrete Solutions shall not be responsible for loss, damage or injury resulting from reliance upon or failure to adhere to any recommendation or information contained herein, from abnormal use of the material, or any hazard inherent in the nature of the material.