SAFETY DATA SHEET

Lith

Li2O / K2O / SiO2 LITHIUM POTASSIUM SILICATE (LPS)39 Polysilicate

ASG Chemical Holdings, LLC. (ASG Chemie) Chemwatch: 5350-92 Version No: 8.1 Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Chemwatch Hazard Alert Code: 3 Issue Date: 23/12/2022 Print Date: 06/08/2023 S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Lith; LITHIUM POTASSIUM SILICATE (LPS)39
Chemical Name	Lithium Potassium Silicate Polysilicate
Synonyms	Not Available
Chemical formula	Not Applicable
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses Use according to manufacturer's directions.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

-	
Registered company name	ASG Chemical Holdings {ASG Chemie}
Address	2603 NW 13th St. Florida 32609 United States
Telephone	+13524321481
Fax	Not Available
Website	www.asgchemie.com
Email	compliance@asgchemie.com

Emergency phone number

Association / Organisation	Chemwatch	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone numbers	1800951288	+1 855-237-5573
Other emergency telephone numbers	Not Available	+61 3 9573 3188

Once connected and if the message is not in your preferred language then please dial 01 Una vez conectado y si el mensaje no está en su idioma preferido, por favor marque 02 Chemwatch: 5350-92 ~ Version No: 8.1

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

> Classification Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 1

Label elements	
Hazard pictogram(s)	The second secon
Signal word	Danger
Hazard statement(s)	
H315	Causes skin irritation.
H318	Causes serious eye damage.
Hazard(s) not otherwise classified	
Not Applicable	
Precautionary statement(s) Prevention	
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.
Precautionary statement(s) Response	
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/doctor/physician/first aider.
P302+P352	IF ON SKIN: Wash with plenty of water.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
Precautionary statement(s) Storage	
Not Applicable	
Precautionary statement(s) Disposal	
Not Applicable	

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SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name	
1312-76-1	20-30	potassium silicate	
12627-14-4	4-6	lithium polysilicate	
Not Available	balance	Ingredients determined not to be hazardous	
Not Available		includes	
7732-18-5	<75	water	

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measures Eye Contact If this product comes in contact with the eyes: • Immediately hold eyelids apart and flush the eye continuously with 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. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. • Transport to hospital or doctor without delay. 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 fumes or combustion products are inhaled remove 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. Ingestion 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.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5 Fire-fighting 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 m	ixture
Fire Incompatibility	None known.
Special protective equipment and precautions for	or fire-fighters
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 not. Cool fire expressed containers with water enrou from a protected location
	Cool life exposed containers with water spray from a protected location.
	Fauinment should be thoroughly decontaminated after use
Fire/Explosion Hazard	Non combustible.
	 Not considered a significant fire risk, however containers may burn.
	Decomposition may produce toxic fumes of: silicon dioxide (SiO2) metal oxides. May emit corrosive fumes.
SECTION 6 Accidental release measures	
Personal precautions, protective equipment and	d emergency procedures
See section 8	
Environmental precautions See section 12	
Methods and material for containment and clear	ning up
	Slipperv when spilt
	Clean up all spills immediately.
	 Avoid breathing vapours and contact with skin and eyes.
	Control personal contact with the substance, by using protective equipment.
	Contain and absorb spill with sand, earth, inert material or vermiculite. Wine up
	 Place in a suitable, labelled container for waste disposal.
Major Spills	Suppery when split. Minor bazard
	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. Contain april with cond. contained and the contained and t
	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 waterways occurs, advise emergency services.
Personal Protective Equipment advice is contained	ed in Section 8 of the SDS.
CECTION 7 Handling and store as	
SECTION 7 Handling and storage	
Precautions for safe handling	
Safe handling	Limit all unnecessary personal contact.
	Wear protective clothing when risk of exposure occurs.
	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.
- DO NOT allow clothing wet with material to stay in contact with skin

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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. 	
nditions for safe storage, including any in	compatibilities	
Suitable container	• Lined metal can, lined metal pail/ can.	

Со

Suitable container	 Lined metal can, lined metal pail/ can.
	Plastic pail.
	Polyliner drum.
	 Packing as recommended by manufacturer.

• Check all containers are clearly labelled and free from leaks.

Storage incompatibility

- For storage, no aluminium, light alloy, galvanised steel and glass receptacles or pipes should be used. On contact with aluminium or light alloys hydrogen gas may be evolved.
- Steel, stainless steel and alkali stable plastic materials are generally appropriate.
- Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates.
- Avoid contact with copper, aluminium and their alloys.

SECTION 8 Exposure controls / personal protection

Control parameters			
Occupational Exposure Limits (OEL) INGREDIENT DATA	Not Available		
Emergency Limits			
Ingredient	TEEL-1	TEEL-2	TEEL-3
potassium silicate	30 mg/m3	330 mg/m3	2,000 mg/m3
Ingredient	Original IDLH	Revised IDLH	
potassium silicate	Not Available	Not Available	
lithium polysilicate	Not Available	Not Available	
water	Not Available	Not Available	

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
potassium silicate	С	> 0.1 to ≤ milligrams per cubic meter of air (mg/m³)
lithium polysilicate	E	≤ 0.01 mg/m³
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based o a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is 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.
Individual protection measures, such as personal protective equipment		
Eye and face protection	Safety glasses with side shields.	
	• Chemical goggles. [AS/NZS 1337.1, EN1	66 or national equivalent]
	 Contact lenses may pose a special hazar policy document, describing the wearing or task. This should include a review of le an account of injury experience. Medical equipment should be readily available. In remove contact lens as soon as practical - lens should be removed in a clean envir NIOSH Current Intelligence Bulletin 59]. 	rd; soft contact lenses may absorb and concentrate irritants. A written of lenses or restrictions on use, should be created for each workplace ens absorption and adsorption for the class of chemicals in use and and first-aid personnel should be trained in their removal and suitable the event of chemical exposure, begin eye irrigation immediately and ole. Lens should be removed at the first signs of eye redness or irritation ronment only after workers have washed hands thoroughly. [CDC
Skin protection	See Hand protection below	
Hands/feet protection	 When prolonged or frequently repeated c (breakthrough time greater than 240 minu is recommended. 	contact may occur, a glove with a protection class of 5 or higher utes according to EN 374, AS/NZS 2161.10.1 or national equivalent)
	 When only brief contact is expected, a gl than 60 minutes according to EN 374, AS 	ove with a protection class of 3 or higher (breakthrough time greater /NZS 2161.10.1 or national equivalent) is recommended.
	 Some glove polymer types are less affect considering gloves for long-term use. 	ted by movement and this should be taken into account when
	 Contaminated gloves should be replaced 	ł.
	As defined in ASTM F-739-96 in any applic	ation, gloves are rated as:
	• Excellent when breakthrough time > 480	min
	 Good when breakthrough time > 20 min 	
	 Fair when breakthrough time < 20 min 	
	Poor when glove material degrades	
	For general applications, gloves with a thic	kness typically greater than 0.35 mm, are recommended.
	It should be emphasised that glove thickne specific chemical, as the permeation efficie glove material. Therefore, glove selection s knowledge of breakthrough times.	ess is not necessarily a good predictor of glove resistance to a ency of the glove will be dependent on the exact composition of the should also be based on consideration of the task requirements and
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Recommended material(s)	GLOVE SELECTION INDEX
	• Eye wash unit.
	Skin cleansing cream.
	Barrier cream.
	• P.V.C apron.
Other protection	Overalls.
Body protection	See Other protection below
	 Indexer gioves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
	 Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. Thicker gloves (we take a group of the security of the
	Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:
	 Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

al(s) GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the: "Forsberg Clothing Performance Index". The effect(s) of the following substance(s) are taken into account in the computergenerated selection: Xeolith LS 250 Lithium Silicate

Material	СРІ
BUTYL	А
NEOPRENE	А
VITON	А
NATURAL RUBBER	С
PVA	С

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

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RESPIRATORY PROTECTION

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used
- Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1,000	@1@-AUS / Class1 @2@	
up to 50	1,000		@1@-AUS / Class 1 @2@
up to 50	5,000	Airline *	
up to 100	5,000		@1@-2 @2@
up to 100	10,000		@1@-3 @2@
100+			Airline**

* - Continuous Flow ** - Continuous-flow or positive pressure demand

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)

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties			
Appearance	Thick, clear, colourless alkaline liquid with no odour; mixes with water. pH 11.6-11.8. Dries to form glass film.		
Physical state	Liquid	Relative density (Water = 1)	1.26-1.27
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Alkaline	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	0	Viscosity (cSt)	Not Available
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 Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	>50 (water)
Vapour pressure (kPa)	2 @ 20C	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

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SECTION 10 Stability and reactivity

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	Not normally a hazard due to non-volatile na cause respiratory irritation in some persons.	ture of product. There is some evidence to suggest that the material can The body's response to such irritation can cause further lung damage.
Ingestion	Ingestion may result in nausea, abdominal i	rritation, pain and vomiting.
Skin Contact	The material may cause severe inflammatio time. Repeated exposure can cause contac The material may accentuate any pre-existin be exposed to this material. Entry into the b produce systemic injury with harmful effects external damage is suitably protected.	n of the skin either following direct contact or after a delay of some at dermatitis which is characterised by redness, swelling and blistering. Ing skin condition. Open cuts, abraded or irritated skin should not lood-stream, through, for example, cuts, abrasions or lesions, may as. Examine the skin prior to the use of the material and ensure that any
Eye	If applied to the eyes, this material causes s	severe eye damage.
Chronic	Prolonged or repeated skin contact may ca	use drying with cracking, irritation and possible dermatitis following.
Xeolith LS 250 (Potassium Lithium Silicate)	Not Available	Not Available
potassium silicate	TOXICITY	IRRITATION
	dermal (rat) LD50: >5000 mg/kg[1] Inhalation(Rat) LC50: >2.06 mg/l4h[1] Oral (Rat) LD50: 5000 mg/kg[1]	Not Available
lithium polysilicate	TOXICITY dermal (rat) LD50: >5000 mg/kg[1] Inhalation(Rat) LC50: >2.06 mg/l4h[1] Oral (Rat) LD50: 2500 mg/kg[1]	IRRITATION Not Available
water	ΤΟΧΙΟΙΤΥ	IRRITATION
	Oral (Rat) LD50: >90000 mg/kg[2]	Not Available
Legend:	1. Value obtained from Europe ECHA Regis manufacturer's SDS. Unless otherwise spec chemical Substances	stered Substances - Acute toxicity 2. Value obtained from cified data extracted from RTECS - Register of Toxic Effect of
POTASSIUM SILICATE & LITHIUM POLYSILICATE	Asthma-like symptoms may continue for mo due to a non-allergic condition known as re exposure to high levels of highly irritating co previous airways disease in a non-atopic in minutes to hours of a documented exposure airflow pattern on lung function tests, mode testing, and the lack of minimal lymphocytic irritating inhalation is an infrequent disorder the irritating substance. On the other hand, due to high concentrations of irritating subs ceases. The disorder is characterized by di	onths or even years after exposure to the material ends. This may be active airways dysfunction syndrome (RADS) which can occur after ompound. Main criteria for diagnosing RADS include the absence of dividual, with sudden onset of persistent asthma-like symptoms within e to the irritant. Other criteria for diagnosis of RADS include a reversible rate to severe bronchial hyperreactivity on methacholine challenge : inflammation, without eosinophilia. RADS (or asthma) following an with rates related to the concentration of and duration of exposure to industrial bronchitis is a disorder that occurs as a result of exposure tance (often particles) and is completely reversible after exposure fficulty breathing, cough and mucus production.
POTASSIUM SILICATE & LITHIUM POLYSILICATE POTASSIUM SILICATE & LITHIUM POLYSILICATE & WATER	Asthma-like symptoms may continue for mo due to a non-allergic condition known as re exposure to high levels of highly irritating co previous airways disease in a non-atopic in minutes to hours of a documented exposure airflow pattern on lung function tests, mode testing, and the lack of minimal lymphocytic irritating inhalation is an infrequent disorder the irritating substance. On the other hand, due to high concentrations of irritating subs ceases. The disorder is characterized by di No significant acute toxicological data iden	onths or even years after exposure to the material ends. This may be active airways dysfunction syndrome (RADS) which can occur after ompound. Main criteria for diagnosing RADS include the absence of dividual, with sudden onset of persistent asthma-like symptoms within e to the irritant. Other criteria for diagnosis of RADS include a reversible rate to severe bronchial hyperreactivity on methacholine challenge c) inflammation, without eosinophilia. RADS (or asthma) following an with rates related to the concentration of and duration of exposure to industrial bronchitis is a disorder that occurs as a result of exposure fance (often particles) and is completely reversible after exposure fficulty breathing, cough and mucus production.
POTASSIUM SILICATE & LITHIUM POLYSILICATE POTASSIUM SILICATE & LITHIUM POLYSILICATE & WATER Acute Toxicity	Asthma-like symptoms may continue for modue to a non-allergic condition known as re exposure to high levels of highly irritating co previous airways disease in a non-atopic in- minutes to hours of a documented exposure airflow pattern on lung function tests, mode testing, and the lack of minimal lymphocytic irritating inhalation is an infrequent disorder the irritating substance. On the other hand, due to high concentrations of irritating subs ceases. The disorder is characterized by di No significant acute toxicological data idem	onths or even years after exposure to the material ends. This may be active airways dysfunction syndrome (RADS) which can occur after ompound. Main criteria for diagnosing RADS include the absence of dividual, with sudden onset of persistent asthma-like symptoms within e to the irritant. Other criteria for diagnosis of RADS include a reversible rate to severe bronchial hyperreactivity on methacholine challenge conflammation, without eosinophilia. RADS (or asthma) following an with rates related to the concentration of and duration of exposure to industrial bronchitis is a disorder that occurs as a result of exposure fficulty breathing, cough and mucus production. tified in literature search.
POTASSIUM SILICATE & LITHIUM POLYSILICATE POTASSIUM SILICATE & LITHIUM POLYSILICATE & WATER Acute Toxicity Skin Irritation/Corrosion	Asthma-like symptoms may continue for mo due to a non-allergic condition known as re exposure to high levels of highly irritating co previous airways disease in a non-atopic in minutes to hours of a documented exposure airflow pattern on lung function tests, mode testing, and the lack of minimal lymphocytic irritating inhalation is an infrequent disorder the irritating substance. On the other hand, due to high concentrations of irritating subs ceases. The disorder is characterized by di No significant acute toxicological data iden *	onths or even years after exposure to the material ends. This may be active airways dysfunction syndrome (RADS) which can occur after propound. Main criteria for diagnosing RADS include the absence of dividual, with sudden onset of persistent asthma-like symptoms within e to the irritant. Other criteria for diagnosis of RADS include a reversible rate to severe bronchial hyperreactivity on methacholine challenge inflammation, without eosinophilia. RADS (or asthma) following an with rates related to the concentration of and duration of exposure to industrial bronchitis is a disorder that occurs as a result of exposure ficulty breathing, cough and mucus production. tfield in literature search. Carcinogenicity Reproductivity
POTASSIUM SILICATE & LITHIUM POLYSILICATE POTASSIUM SILICATE & LITHIUM POLYSILICATE & WATER Acute Toxicity Skin Irritation/Corrosion Serious Eye Damage/Irritation	Asthma-like symptoms may continue for module to a non-allergic condition known as re exposure to high levels of highly irritating co previous airways disease in a non-atopic in minutes to hours of a documented exposure airflow pattern on lung function tests, mode testing, and the lack of minimal lymphocytic irritating inhalation is an infrequent disorder the irritating substance. On the other hand, due to high concentrations of irritating subs ceases. The disorder is characterized by di No significant acute toxicological data idem *	onths or even years after exposure to the material ends. This may be active airways dysfunction syndrome (RADS) which can occur after ompound. Main criteria for diagnosing RADS include the absence of dividual, with sudden onset of persistent asthma-like symptoms within e to the irritant. Other criteria for diagnosis of RADS include a reversible rate to severe bronchial hyperreactivity on methacholine challenge conflammation, without eosinophilia. RADS (or asthma) following an with rates related to the concentration of and duration of exposure to industrial bronchitis is a disorder that occurs as a result of exposure ficulty breathing, cough and mucus production. tified in literature search. Carcinogenicity Reproductivity STOT - Single Exposure
POTASSIUM SILICATE & LITHIUM POLYSILICATE POTASSIUM SILICATE & LITHIUM POLYSILICATE & WATER Acute Toxicity Skin Irritation/Corrosion Serious Eye Damage/Irritation Respiratory or Skin sensitisation	Asthma-like symptoms may continue for mo due to a non-allergic condition known as re exposure to high levels of highly irritating co previous airways disease in a non-atopic in minutes to hours of a documented exposure airflow pattern on lung function tests, mode testing, and the lack of minimal lymphocytic irritating inhalation is an infrequent disorder the irritating substance. On the other hand, due to high concentrations of irritating subs ceases. The disorder is characterized by di No significant acute toxicological data idem * * *	onths or even years after exposure to the material ends. This may be active airways dysfunction syndrome (RADS) which can occur after ompound. Main criteria for diagnosing RADS include the absence of dividual, with sudden onset of persistent asthma-like symptoms within e to the irritant. Other criteria for diagnosis of RADS include a reversible rate to severe bronchial hyperreactivity on methacholine challenge : inflammation, without eosinophilia. RADS (or asthma) following an with rates related to the concentration of and duration of exposure to industrial bronchitis is a disorder that occurs as a result of exposure tance (often particles) and is completely reversible after exposure fficulty breathing, cough and mucus production.
POTASSIUM SILICATE & LITHIUM POLYSILICATE & LITHIUM POLYSILICATE & LITHIUM POLYSILICATE & WATER Acute Toxicity Skin Irritation/Corrosion Serious Eye Damage/Irritation Respiratory or Skin sensitisation Mutagenicity	Asthma-like symptoms may continue for mo due to a non-allergic condition known as re exposure to high levels of highly irritating co previous airways disease in a non-atopic in minutes to hours of a documented exposur- airflow pattern on lung function tests, mode testing, and the lack of minimal lymphocytic irritating inhalation is an infrequent disorder the irritating substance. On the other hand, due to high concentrations of irritating subs ceases. The disorder is characterized by di No significant acute toxicological data iden * * * *	onths or even years after exposure to the material ends. This may be active airways dysfunction syndrome (RADS) which can occur after ompound. Main criteria for diagnosing RADS include the absence of dividual, with sudden onset of persistent asthma-like symptoms within e to the irritant. Other criteria for diagnosis of RADS include a reversible rate to severe bronchial hyperreactivity on methacholine challenge conflammation, without eosinophilia. RADS (or asthma) following an with rates related to the concentration of and duration of exposure to industrial bronchitis is a disorder that occurs as a result of exposure fficulty breathing, cough and mucus production.

✓ -Data available to make classification

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SECTION 12 Ecological information

Toxicity						
	Xeolith LS 250 Lithium Silicate	Endpoint	Test Duration (hr)	Species	Value	Source
		Not Available	Not Available	Not Available	Not Available	Not Available
	potassium silicate	Endpoint	Test Duration (hr)	Species	Value	Source
		EC50	72h	Algae or other aquatic plants	207mg/l	2
		EC0(ECx)	72h	Algae or other aquatic plants	35mg/l	2
	lithium polysilicate	Endpoint	Test Duration (hr)	Species	Value	Source
		EC50	72h	Algae or other aquatic plants	207mg/l	2
		EC50	48h	Crustacea	>220mg/l	2
		LC50	96h	Fish	>27.5mg/l	2
		EC0(ECx)	72h	Algae or other aquatic plants	35mg/l	2
	water	Endpoint	Test Duration (hr)	Species	Value	Source
		Not Available	Not Available	Not Available	Not Available	Not Available
	Legend:	Extracted from 1	. IUCLID Toxicity Data 2	. Europe ECHA Registered Substa	ances - Ecotoxicolo	ogical Information

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Prevent, by any means available, spillage from entering drains or water courses.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW

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.
	 Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
	 Treat and neutralise at an approved treatment plant.
	 Treatment should involve: Neutralisation with suitable dilute acid followed by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after

admixture with suitable combustible material).Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 Transport information

Labels Required		
M	arine Pollutant	NO
		Shipping container and transport vehicle placarding and labeling may vary from the below information. Products that are regulated for transport will be packaged and marked as Dangerous Goods in Limited Quantities according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate labels and markings in accordance with applicable transport regulations.
		Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
		Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
		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

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
potassium silicate	Not Available
lithium polysilicate	Not Available
water	Not Available

Transport in bulk in accordance with the IGC Code

Product name Shin Type

i roudot name	omp type
potassium silicate	Not Available
lithium polysilicate	Not Available
water	Not Available

SECTION 15 Regulatory information

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

potassium silicate is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs), US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

lithium polysilicate is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

water is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable	
(Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	Yes

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Specific tar	get organ toxicity			
(single or repeated exposure)		No		
Aspiration Hazard		No		
Germ cell mutagenicity		No		
Simple Asphyxiant		No		
Hazards Not Oth	erwise Classified	No		
US. EPA CERCLA Hazard and Reportable Quantitie	dous Substances es (40 CFR 302.4)	None Reported		
State Regulations				
US. Californi	ia Proposition 65	None Reported		
National Inventory Status				
National Inventory Status	ational Inventory	Status		
Australia - AIIC / Australia				
Non-Industrial Use		Yes		
Canada - DSL		Yes		
Canada - NDSL		No (potassium silicate; lithium polysilicate; water)		
China - IECSC		Yes		
Europe - EINEC / ELINCS / NLP		Yes		
Japan - ENCS		Yes		
Korea - KECI		Yes		
New Zealand - NZIoC		Yes		
Philippines - PICCS		No (lithium polysilicate)		
USA - TSCA		Yes		
Taiwan - TCSI		Yes		
Mexico - INSO		Yes		
Vietnam - NCI		Yes		
Russia - FRFPH		No (lithium polysilicate)		
Legend:		Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.		
SECTION 16 Other informat	tion			
Revision Date		23/12/2022		
	Initial Date	27/05/2019		
SDS Version Summary	Version	Date of Update	Sections Updated	
	7.1 1	3/08/2020	Toxicological information - Acute Health (eye), Toxicological information - Acute Health (skin), Hazards identification -Classification, First Aid measures - First Aid (eye), Composition information on ingredients - Ingredients, Exposure controls / personal protection - Personal Protection (Respirator), Exposure controls / personal protection - Personal Protection (eye), Exposure controls / personal protection - Personal Protection (hands/feet)	
	8.1	22/12/2022	Classification review due to GHS Revision change.	
Other information		Classification of the preparation and its individual components has drawn on official and authoritative sources as		

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.

well as independent review by the Chemwatch Classification committee using available literature references.

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Chemwatch: 5363-69 ~ Version No: 7.1

Definitions and abbreviations

PC-TWA:	Permissible Concentration-Time Weighted Average		
PC-STEL:	Permissible Concentration-Short Term Exposure Limit		
IARC:	International Agency for Research on Cancer		
ACGIH:	American Conference of Governmental Industrial Hygienists		
STEL:	Short Term Exposure Limit		
TEEL:	Temporary Emergency Exposure Limit		
IDLH:	Immediately Dangerous to Life or Health Concentrations		
ES:	Exposure Standard		
OSF:	Odour Safety Factor		
NOAEL :	No Observed Adverse Effect Level		
LOAEL:	Lowest Observed Adverse Effect Level		
TLV:	Threshold Limit Value		
LOD:	Limit Of Detection		
OTV:	Odour Threshold Value		
BCF:	BioConcentration Factors		
BEI:	Biological Exposure Index		
AIIC:	Australian Inventory of Industrial Chemicals		
DSL:	Domestic Substances List		
NDSL:	Non-Domestic Substances List		
IECSC:	Inventory of Existing Chemical Substance in China		
EINECS:	European INventory of Existing Commercial chemical Substances		
ELINCS:	European List of Notified Chemical Substances		
NLP:	No-Longer Polymers		
ENCS:	Existing and New Chemical Substances Inventory		
KECI:	Korea Existing Chemicals Inventory		
NZIoC:	New Zealand Inventory of Chemicals		
PICCS:	Philippine Inventory of Chemicals and Chemical Substances		
TSCA:	Toxic Substances Control Act		
TCSI:	Taiwan Chemical Substance Inventory		
INSQ:	Inventario Nacional de Sustancias Químicas		
NCI:	National Chemical Inventory		
FBEPH:	Russian Register of Potentially Hazardous Chemical and Biological Substances		

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