

# SAFETY DATA SHEET

## 1. IDENTIFICATION

- 1.1** Product identifier  
 Trade name : PSC 2511 CureHard Repellent  
 Chemical name : Mixture of Lithium, Sodium Silicate and alkaline Silicate Solution
- 1.2** Recommended use of the product and restrictions on use  
 Recommended use : Industrial Use Only  
 Non- recommended use(s) : None known
- 1.3** Details of the supplier of the safety data sheet  
 Company : Polymer Science Corporation.  
 : Unit 1133, 6027 – 79 Avenue S.E  
 : Calgary, Alberta. Canada T2C 5P1  
 Telephone : 403 287 2751  
 Fax : 403 287 2766  
 Website : www.polymersciencecorp.com
- 1.4** Emergency telephone number  
 Emergency : In case of emergency call CANUTEC: 613-996-6666

## 2. HAZARD IDENTIFICATION

### 2.1 Classification of the substance or mixture

Skin Corrosion / irritation : Category 1  
 Eye Damage / Eye Irritation : Category 1

Hazards summary : Causes severe skin burns and eye damage.  
 Caution- Spillages may be slippery

### 2.2 Label Elements

Symbol :



Signal word : Danger

Hazard statement : H314: Causes severe skin burns and eye damage.

Precautionary Statements : P262: Do not get in eyes, on skin, or on clothing.  
 P264 Wash skin thoroughly after handling  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.  
 P301+P330+P331+310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.  
 P303+P361+P353+P310: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.  
 P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
 P363 Wash contaminated clothing before reuse.

## 3 COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substances

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### 3.2 Mixtures

#### PSC 2511 CureHard Repellent.

##### HAZARDOUS INGREDIENTS

	C.A.S.#	WEIGHT %
Silicic acid, Sodium salt	1344-09-8	10 - 30
Lithium Silicate	12627-14-4	5 - 10
Potassium methylsilanetriolate	31795-24-1	3 – 6
Methanol	67-56-1	0.05 – 0.1
Water	7732-18-5	40 - 80

## 4 FIRST AID MEASURES

### 4.1 Description of first aid measures

<b>EYE CONTACT:</b>	Rinse cautiously with eyewash solution or clean water, holding the eyelids apart for several minutes. Remove contact lenses if present and easy to do. If eye irritation persists: Get medical attention. Continue rinsing eyes during transport to hospital
<b>SKIN CONTACT:</b>	If on skin or hair, take off immediately all contaminated clothing and shoes. Rinse skin, washing thoroughly with water. Get medical attention if irritation persists.
<b>INHALATION:</b>	Remove patient from exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention
<b>INGESTION:</b>	Clean mouth with water and drink afterwards a glass of water. Keep respiratory tract clear. Do not induce vomiting. Immediately call a POISON CENTER / Doctor

- 4.2 Most important symptoms and effects, both acute and delayed: Alkaline.  
Causes digestive tract burns  
Causes serious eye damage  
Causes severe burns.
- 4.3 Notes to Physician. Treat symptomatically and supportively.

## 5 FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media  
Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or alcohol resistant foam.  
Unsuitable extinguishing media : None known
- 5.2 Hazards : Not applicable. Aqueous solution. Non-combustible
- 5.3 Fire-fighting instructions : None.

## 6 ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures.  
Use personal protective equipment. Wear chemical safety glasses, rubber boots and heavy rubber gloves. Prevent further leakage or spillage if safe to do so.
- 6.2 Environmental precautions  
Do not allow to enter drains, waterways, sewers, basements or confined areas.  
Do not discharge into the subsoil / soil. Absorb spills with inert material and place in a chemical waste container. If the product contaminates rivers and lakes or drains inform the respective authorities. Prevent spreading over a wide area (e.g. by containment or oil barriers)
- 6.3 Methods and materials for containment and cleaning up  
Caution: Spillages may be slippery. Soak up with inert absorbent material (e.g. sand, silica gel, universal binder, sawdust) Keep in suitable, closed containers for disposal. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.

## 7 HANDLING AND STORAGE

- 7.1 Precautions for safe handling  
Avoid all personal contact. Use personal protective equipment. Avoid generation of mist. Provide adequate ventilation. Emergency shower and eye wash facilities should be readily available. Do not eat, drink or smoke at the work place. Keep container tightly closed. Take care to prevent spills, waste and minimize release to the environment.
- 7.2 Hygiene considerations.  
Wash hands before breaks and after work. Remove soiled or soaked clothing immediately. Wash contaminated clothes before reuse. Do not eat, drink or smoke when handling this product. Remove contaminated clothing and protective equipment before entering eating areas.
- 7.3 Safe storage procedures  
Keep at a temperature not exceeding 50 °C. Do not allow material to freeze. Unsuitable containers: Aluminium. Keep in properly labeled containers. Store locked up. Keep tightly closed.
- 7.4 Materials to Avoid  
Do not store with strong oxidizing agents, organic peroxides or explosives.

## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 EXPOSURE LIMITS

Hazardous Components (Chemical Name)	Occupational Exposure Limits
Silicic acid, Sodium salt	No Occupational Exposure Limit assigned
Lithium Silicate	No Occupational Exposure Limit assigned
Methanol	ACGIH TWA: 200ppm. ACGIH STEL: 250 ppm. NIOSH REL TWA: 200 ppm, 260 mg/m <sup>3</sup> . NIOSH REL ST: 250 ppm, 325 mg/m <sup>3</sup> . OSHA-1 TWA: 200 ppm, 260 mg/m <sup>3</sup>
	<u>Biological occupational exposure limit</u>
	Biological specimen: Urine
	Sampling time: End of shift (As soon as possible after exposure ceases)
	Permissible concentration: 15 mg/.
	Basis: ACGIH BEI
Water	No Occupational Exposure Limit assigned

### 8.2 EXPOSURE CONTROLS

#### ENGINEERING CONTROLS

Use local exhaust ventilation to maintain airborne concentrations at safe levels. Suitable respiratory equipment should be used in cases of insufficient ventilation or where demand it. Minimize workplace exposure concentrations.

#### PERSONAL PROTECTIVE EQUIPMENT

- Respiratory Equipment : Respiratory protection not normally required.  
Eye Protection : Use tightly fitting chemical splash goggles. Wear face shield if splashing hazard exists.  
Hand Protection : Use impermeable gloves. Neoprene or butyl-rubber gloves

Body Protection	: Use impervious clothing and chemical resistant boots. Consider using resistant coveralls and aprons, if extensive exposure is possible.
Other Protective Equipment	: Ensure that eyewash stations and safety showers are close to the workstation location.
General Hygiene Consideration	: Do not breathe mist or vapor. Avoid all contact. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Do not take contaminated clothes home.
Environmental Exposure Controls	: The primary hazard of this product is the alkalinity. Avoid runoff into storm sewers and ditches which lead to waterways.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

<u>Appearance:</u>	
Physical State	: Liquid.
Color	: Clear, Colorless.
Odor	: Odourless
<u>Properties</u>	
Boiling Point	: 100 °C
Melting Point	: Not available
Freezing Point	: Not available
Flash Point	: Not available.
PH	: 10 - 11
Specific Gravity	: 1.0 – 1.05 g/ cm <sup>3</sup>
Viscosity	: Not available
VOC content	: 0
Evaporation rate	: Not applicable
Solubility in water	: Soluble
Vapour pressure	: Not applicable
Vapour density	: No data
Auto ignition Point	: Not applicable
Decomposition Temperature	: Not applicable
Explosive properties	: Not applicable
Oxidising Properties	: No data

## 10 STABILITY AND REACTIVITY

Chemical Stability	: Stable under normal conditions
Possibility of hazardous reactions	: When arc welding vessels containing aqueous solutions of this material, take care to control any explosion risk from hydrogen evolved by electrolysis. Aqueous solutions will react with aluminium, zinc, tin and their alloy evolving hydrogen gas which can form an explosive mixture with air. Can react violently if in contact with acids. Can react with sugar residues to form carbon monoxide. Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	: see previous item.
Incompatible materials	: Oxidizing agents, acids.
Hazardous decomposition products	: Formaldehyde.

## 11 TOXICOLOGICAL INFORMATION

<b>Acute toxicity</b>			
<b>INGREDIENTS</b>			
Silicic acid, Sodium salt	<b>Oral LD50</b> (rat) 3400 mg/Kg	<b>Inhalation LC50</b> (rat) 2.06 g/m <sup>3</sup>	<b>Dermal LD50</b> (rat) 5000 mg/Kg
Lithium Silicate	No Data	No Data	No Data
Potassium methylsilanetriolate	>2000 mg/Kg	No Data	No Data
Methanol	(Humans) 300 mg/Kg Method: Expert judgment	3 mg/l. Exposure time:4h. Test atmosphere: Vapor Method: Expert judgment	(Humans) 3 mg/l Method: Expert judgment
Ingestion	: Toxicity are due to high alkalinity. Material will cause irritation. Oral LD50 (rat) 3400 mg/Kg. Lithium compounds may damage the central nervous system. A large dose may have the following effects: Headache, nausea, dizziness, convulsions, kidney damage.		
Inhalation	: Mist is irritant to the respiratory tract. All symptoms of acute toxicity are due to high alkalinity. Inhalation LC50 (rat) >2.06 g/m <sup>3</sup>		
Skin Contact	: Material will cause irritation. Dermal LD50 (rat)>5000 mg/Kg		
Eye Contact	: Material will cause irritation. Liquid or mist may cause discomfort and mild irritation.		
Skin corrosion/irritation	: Irritating to skin		
Serious eye damage/irritation	: Irritating to eyes.		
Sensitisation	: Not sensitising		
Mutagenicity	: No evidence of genotoxicity. In vitro/in vivo negative		
Carcinogenicity	: No structural alerts IARC, NTP, OSHA, ACGIH do not list this product as known or suspected carcinogen.		
Reproductive toxicity	: No evidence of reproductive toxicity or developmental toxicity for sodium silicate. Lithium compounds- teratogenic Effects have been observed in laboratory animals.		
Specific Target Organ Toxicity Single Exposure	: Not Classified		
Specific Target Organ Toxicity	: Not Classified		

Repeated Exposure  
Aspiration Hazard : No aspiration hazard expected.

## 12 ECOLOGICAL INFORMATION

- 12.1 Toxicity : Fish (Brachydanio rerio) LC50 (96 hour) 1108 mg/l  
Aquatic invertebrates: (Daphnia magna) EC50 (48 hour) 1700 mg/l
- 12.2 Persistence and Degradability : Inorganic. Soluble silicates, upon dilution, rapidly depolymerize into molecular species indistinguishable from Natural dissolved silica.
- 12.3 Bioaccumulative potential : Inorganic. The substances have no potential for bioaccumulation
- 12.4 Mobility in Soil : Not applicable
- 12.5 Results of PBT and vPvB assessment : Not classified as PBT or vPvB
- 12.6 Other adverse effects : The alkalinity of this material will have a local effect on ecosystems sensitive to changes in pH

## 13 DISPOSAL CONSIDERATIONS

### Waste Disposal Method

Dispose of this material and its container to hazardous or special waste collection point. Do not discharge substance/product into sewage system. Do not contaminate pond, waterways or ditches with chemical or used container. The product should not be allowed to enter drains, water courses or the soil.

## 14 TRANSPORTATION INFORMATION

- 14.1 Identification, UN number : Not Classified according to the United Nations  
Not classified as hazardous under DOT or US Transport  
International Maritime Dangerous Good (IMDG) Code: Not classified as hazardous.
- 14.2 Shipping Name : Not applicable
- 14.3 Hazard Class : Not applicable
- 14.4 Packing Group : Not applicable
- 14.5 Environmental Hazards : Not classified as a Marine Pollutant
- 14.6 Special precautions for user : Unsuitable containers: Aluminium

## 15 OTHER INFORMATION

Preparation Date : March 14, 2017  
SDS prepared by : Polymer Science Corp. 403 287 2751

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