



CAPTAIN INDUSTRIES

# Captain Industries

## MATERIAL SAFETY DATA SHEET

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Trade Name:	K 25, K 21
Synonyms:	Potassium Silicate Lumps, Potassium Silicate Glass
Date Prepared:	March 21, 2006
Supersedes revision of:	June 17, 2024

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer:	Captain Industries Captain Place, F-192, Park Lane, Block 5, Clifton Karachi-75600 Phone Number: (9221) 3583-2044 - 48 Fax Number: (9221) 3583-2049
Substance:	Potassium Silicate Glass

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name:	CAS Registry Number
Potassium silicate:	1312-76-1

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### 3. HAZARDS IDENTIFICATION

Emergency Overview:	Clear to hazy, colorless, odorless glass lumps; causes eye, skin, and digestive tract irritation. Spray mist causes irritation to respiration tract. High PH is harmful to aquatic life. Noncombustible. Spills are slippery. Reacts with acids, ammonium salts, reactive metals and some organics.
Eye contact:	Causes irritation.
Skin contact:	Causes irritation.
Inhalation:	Spray mist irritating to respiratory system.
Ingestion:	May cause irritation to mouth, esophagus, and stomach.
Chronic hazards:	No known chronic hazards.
Physical hazards:	Dries to form glass film which can easily cut skin. Spilled material is very slippery. Can etch glass if not promptly removed.
Carcinogen status:	OSHA           No. NTP            No. LARC           No.

#### 4. FIRST AID MEASURES

Eye:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention.
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:	If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

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#### 5. FIRE FIGHTING MEASURES

Flammable limits:	This material is noncombustible.
Extinguishing Media:	This material is compatible with all extinguishing media.
Hazards to fire-fighters:	See Section 3 for information on hazards when this material is present in the area of a fire.
Fire-fighting Equipment:	The following protective equipment for fire fighters is recommended when this material is present in the area of a fire: chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots.

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#### 6. ACCIDENTAL RELEASE MEASURES

Personal protection:	Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots. See section 8.
Environmental hazards:	Sinks and mixes with water. High pH of this material is harmful to aquatic life, see Section 12. Only water will evaporate from a spill of this material. Keep out of water supplies, sewers, and reservoirs.
Small spill cleanup:	Mop up and neutralize liquid, dispose in accordance with federal, provincial and local regulations or permits.

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## 7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing.  
Keep container closed. Promptly clean up spills.

Storage: Keep containers closed. Separate from acids, reactive metals, and ammonium salts. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers.

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## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering controls: Use with adequate ventilation. Keep containers closed. Safety shower and eyewash fountain should be within direct access.

Respiration protection: Use a NIOSH-approved dust and mist respirator where spray mist occurs. Observe Provincial regulations for respirator use.

Skin protection: Wear body-covering protective clothing and gloves.

Eye protection: Wear chemical goggles.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Glass Lumps

Color: Aquamarine

Odor: Odorless

pH: Approximately 11.3 - 11.7

Specific gravity: (water = 1) Approximately 88 lbs/ft<sup>3</sup>

Solubility in water: Soluble in all proportions.

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## 10. STABILITY AND REACTIVITY

Stability:	This material is stable under all conditions of use and storage.
Conditions to avoid:	None.
Materials to avoid:	Generates heat when mixed with acid. May ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead, and zinc.
Hazardous decomposition Products:	Hydrogen.

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## 11. TOXICOLOGICAL INFORMATION

Toxicity Data:	Direct skin contact may cause irritation. Repeated or prolonged contact may result in dermatitis. Direct contact to eyes may cause severe irritation, pain and burns, possibly severe. The degree of injury depends on the concentration and duration of contact. The full extent of the injury may not be immediately apparent. Repeated or prolonged contact may result in conjunctivitis, lens damage or other effects including blindness.
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## 12. ECOLOGICAL INFORMATION

Fish Toxicity:	This material has exhibited high toxicity to aquatic organisms.
Fate and Transport:	
Biodegradation:	This material is inorganic and not subject to Biodegradation.
Persistence:	This material is believed to persist in the environment.
Bioconcentration:	This material is believed not to bioaccumulate.
Other ecological information:	This material has exhibited slight toxicity to terrestrial organisms.

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## 13. DISPOSAL CONSIDERATIONS

Disposal Method:	Reuse or reprocess if possible. Dispose in accordance with all applicable regulations.
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## 14. TRANSPORT INFORMATION

TDG UN Status:	Not regulated.
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#### 15. REGULATORY INFORMATION:

WHMIS (CANADA):  
FDA:

Class D2B  
Potassium Silicate is regarded as GRAS (Generally Recognized As Safe) as a corrosion preventative in potable water.

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#### 16. OTHER INFORMATION

Prepared by:  
Supersedes revision of:

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June 17, 2024

This information on this Safety Data Sheet is believed to be accurate and to the best information available to Captain Industries. This document is intended only as a guide to the appropriate precautions for handling a chemical by a person trained in chemical handling. Captain Industries makes no warranty of merchant ability or any other warranty, and we assume no liability resulting from the use or handling of the product to which this Safety Data Sheet relates. Users and handlers of this product should make their own investigations to determine the suitability of the information provided herein for their own purposes.



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