



MATERIAL SAFETY DATA SHEET

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POTASSIUM SILICATE LIQUID

SECTION I: IDENTIFICATION OF PRODUCT

Product Name: POTASSIUM SILICATE LIQUID
Chemical Family: Silicates
WHMIS Classification: D2B
Workplace Hazard: Skin and eye irritant

Product Use: Cement binder
TDG Classification: Not regulated
Packaging Group: Not applicable
PIN: Not applicable

SECTION II: HAZARDOUS INGREDIENTS

Ingredients	Percent	CAS Number	LD ₅₀ (Oral/Rat)	LD ₅₀ (Dermal/Rabbit)
Potassium Silicate	15-40	1312-76-1	> 1,000 mg/kg	> 2,000 mg/kg

SECTION III: TOXICOLOGICAL PROPERTIES

Route of entry: Skin Eye Contact Inhalation Ingestion

Effects of acute exposure:

- Mists or sprays are irritating to eyes and respiratory tract.
- Potassium silicate may cause symptoms of skin irritation such as reddening, swelling, rash, scaling or blistering. Prolonged and repeated contact may lead to dermatitis. May cause defatting, drying and cracking of the skin.
- If ingested, this product causes irritation, a burning sensation of the mouth and throat and abdominal pain.

*Note: Effects on eyes and skin may be delayed, and damage may occur without sensation or onset pain, Strict adherence to first aid measures following any exposure is essential.
Symptoms of potassium poisoning may occur. These include slow heartbeat, accelerated breathing, muscle weakness and, in severe cases, paralysis.*

Effects of chronic exposure: No known chronic hazards.

Exposure limits: Not established

Irritancy of product: Skin and eye irritant.

Sensitization to product: None known.

Carcinogenicity: Not listed by ACGIH, NTP, IARC or OSHA as a carcinogen.

Reproductive toxicity: No adverse reproductive effects are anticipated.

Teratogenicity: No adverse teratogenic effects are anticipated.

Mutagenicity: No adverse mutagenic effects are anticipated.

Name of toxicological synergistic products: Not applicable



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SECTION IV: FIRST AID MEASURES

Skin contact: Prompt removal from the material is essential. Flush skin with running water for a minimum of 20 minutes. Start flushing while removing contaminated clothing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. Do not transport victim unless the recommended flushing period is completed or flushing can be continued during transport.

Eye contact: Prompt removal from the material is essential. Immediately flush eyes with running water for a minimum of 20 minutes. Hold eye lids open during flushing. If irritation persists repeat flushing. Obtain medical attention IMMEDIATELY. Do not transport victim unless the recommended flushing period is completed or flushing can be continued during transport.

Inhalation: Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical attention IMMEDIATELY

Ingestion: Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing, rinse mouth out and give ½ to 1 glass of water to dilute material. IMMEDIATELY contact local Poison Control Centre. Vomiting should only be induced under the direction of a physician or a poison control centre. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. IMMEDIATELY transport victim to an emergency facility.

SECTION V: PHYSICAL DATA

Physical state: Liquid

Appearance and odour: Clear colourless liquid. Odourless.

Odour threshold: Not applicable

Specific gravity (°C): 1.26 – 1.39 g/cc

Vapor pressure (mmHG): Not available

Vapor density (Air=1): Not available

Evaporation rate: Not available

Boiling point (°C): 100

Freeze/Melting point (°C): 0

pH (%): 11-12

Co-efficient of water/oil distribution: Soluble in water



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SECTION VI: FIRE AND EXPLOSION DATA

Conditions of flammability: Non flammable. Not normally a fire hazard. Water content of product prevents ignition. Spilled material may cause floors and contact surfaces to become slippery. Enforce NO SMOKING rules in area of use.

Means of extinguishing: Use media appropriate for surrounding area.

Flash point: Does not flash

Upper flammable limit: Not available.

Lower flammable limit: Not available.

Auto-ignition temperature: Not available.

Hazardous combustion products: Thermal decomposition products are toxic and may include oxides of carbon, potassium, silicon, and irritating gases.

Explosion data-sensitivity to mechanical impact: Not expected to be sensitive to mechanical impact.

Explosion data-sensitivity to static discharge: Not expected to be sensitive to static discharge.

SECTION VII: REACTIVITY DATA

Chemically unstable (conditions): Stable.

Product incompatible with: Avoid strong oxidizers. Lewis or mineral acids.

Conditions of reactivity: Avoid high temperatures, sparks, open flames and all other sources of ignition.

Hazardous decomposition products: Thermal decomposition products are toxic and may include oxides of carbon, potassium, silicon, and irritating gases.



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SECTION VIII: PREVENTATIVE MEASURES

Personal protective equipment:

- **Eye protection:** Safety glasses with side shields are recommended to prevent eye contact. Use chemical safety goggles when there is a potential for eye contact. Contact lenses should not be worn when working with this material.
- **Skin protection:** Gloves and protective clothing made from rubber should be impervious under conditions of use. Discard contaminated gloves. Prior to use, user should confirm impermeability.
- **Respiratory Protection:** No specific guidelines available. A NIOSH/MSHA-approved air purifying respirator equipped with dust, mist, fume cartridges for concentrations are higher or unknown.
- **Other personal protective equipment:** Wear impermeable apron and boots. Locate safety shower and eyewash station close to chemical handling area. Take all precautions to void personal contact.

Specific engineering controls: General exhaust is acceptable. Local exhaust ventilation preferred. Make up air should be supplied balance air that is removed by local or general exhaust ventilation. Ventilate low lying areas such as sumps or pits where dense vapours may collect.

Procedures for leak/spills: Neutralize carefully with weak acid to a pH of 6 to 9. Effervescence may result. Neutralization is expected to be exothermic. Wear protective clothing. Collect product for recovery or disposal. For release to land, or storm water run off, contain discharge by constructing dykes or applying inert absorbent; for release to water, utilize damming and/or water diversion to minimize the spread contamination. Ventilate enclosed spaces. Notify applicable government authority if release is reportable or could adversely affect the environment.

Waste disposal: Neutralize carefully with weak acid to a pH of 6 to 9. Effervescence may result. Neutralization is expected to be exothermic.

This information applies to the material as manufactured. Dispose of waste material at an approved (hazardous) waste/treatment disposal facility in accordance with applicable, local, provincial/state, and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems. Reevaluation of the product may be required by the user at the time of disposal since the product uses, transformations, mixtures and processes may influence waste classification.

Empty containers retain product residue and can be dangerous. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioned. Do not expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. Treat package in the same manner as the product.

Handling procedures and equipment: Use under normal “good” industrial hygiene and housekeeping practices. Containers exposed to heat may be under internal pressure. These should be cooled and carefully vented before opening. A face shield and apron should be worn.

Use only with adequate ventilation and avoid breathing vapours, mists and aerosols. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing thoroughly before re-use.

Storage requirements: Store in a cool, well ventilated area. Keep away from heat, sparks and flames. Keep containers closed. Do not expose sealed containers to temperatures above 40°C. Avoid moisture contamination. Protect from direct sun light. Protect against physical damage.

Special shipping information: Not applicable



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SECTION IX: PREPARATION

Date updated: January 11, 2008

Prepared by: Product Safety Committee

All the recommendations and suggestions herein concerning this product are based upon tests and data believed to be reliable, however it is the user's responsibility to determine the safety, toxicity and sustainability for their own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Q'Max Solutions Inc. as to the effects of such use, the results to be obtained, or the safety and toxicity of the product nor does Q'Max Solutions Inc. assume any liability arising out of use by others. Nor is the information herein to be considered as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.