

MATERIAL SAFETY DATA SHEET

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1. CHEMICAL PRODUCT

PRODUCT NAME:

AgriSilK50

Soluble silica liquid fortified with potassium

FERTILIZER GROUP 2 - Registration number B 3756 Act 36 of 1947

MISSTOF GROEP 2 - Registrasienommer B 3756 Wet 36 van

SUPPLIER PQ Silicas South Africa (Pty) Ltd

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2. COMPOSITION INFORMATION ON INGREDIENTS

CHEMICAL FAMILY Silicate
CONTAINS 28% Silicic acid, potassium salt;Potassium Silicate and the balance is Water
CAS NUMBER 1312-76-1

3. HAZARDS IDENTIFICATION

Classified "Irritant" under rules of the EEC "Dangerous Substance Directive" 67/548/EEC as amended by 92/32EEC

Emergency Overview: Clear to hazy, colorless, odorless, thick liquid. Alkalinity causes eye irritation, slight skin irritation, and digestive tract irritation. Spray mist causes irritation to respiratory tract. High pH is harmful to aquatic life. No known chronic hazards. Noncombustible. Spills are slippery. Reacts with acids, ammonium salts, reactive metals and some organics. Dries to form glass film which can easily cut skin. Can etch glass if not promptly removed.

4. FIRST-AID MEASURES

EYE	Alkalinity causes irritation to the eyes. Eye wash facilities must be kept close at hand. Wash immediately with copious amounts of water then obtain medical attention without delay.
SKIN CONTACT	Causes slight irritation to the skin. Wash skin thoroughly with water and remove any contaminated clothing. Obtain medical attention if any symptoms develop.
INHALATION	Spray mist irritating to respiratory tract. Remove to fresh air. Get medical attention if irritation persists.
INGESTION	May cause irritation to mouth, esophagus, and stomach. 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. FIREFIGHTING MEASURES

Not applicable. Aqueous solution. Will not support combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal Protection: Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots.

Environmental Hazards: Sinks and mixes with water. High pH of this material is harmful to aquatic life, Only water will evaporate from a spill of this material.

Mop up and neutralize liquid, then discharge to sewer in accordance with local regulations.

Small Spill Cleanup: Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material as it is slippery. Stop leak if you can do so without risk. Prevent runoff from entering into storm sewers and natural waterways. Isolate, dike and store discharged material, if possible. Use sand or earth to contain spilled material. If containment is impossible, neutralize contaminated area and flush with large quantities of water.

Large Spill Cleanup:

7. HANDLING AND STORAGE

SPECIAL SENSITIVITY No special sensitivity

HANDLING/STORAGE Avoid contact with eyes, skin and clothing. Avoid breathing spray mist. Keep container closed. Promptly clean residue from closures with cloth dampened with water. Promptly clean up spills. Store in clean steel or plastic containers. Separate from acids, reactive metals, and ammonium salts. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers. Do not store at temperatures above 50 degrees celsius for prolonged periods. Material becomes very viscous at low temperatures.

VENTILATION REQUIREMENTS Normal ventilation is adequate.

SENSITIVE TO STATIC ELECTRICITY No

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS	(UK EH40/93) Not listed Potassium Hydroxide has an exposure limit of 2mg/m ³ (10 min TWA). When using AgriSil it is recommended that exposure to alkalinity is, calculated as KOH, should be kept below this limit. Local exhaust ventilation if solution is sprayed or forms an airborne aerosol. Otherwise no special controls are necessary.
VENTILATION REQUIREMENTS	
EYE PROTECTION REQUIREMENTS	Safety glasses, goggles or face shield to protect against splashing.
GLOVE REQUIREMENTS	Impermeable plastic or rubber gloves.
CLOTHING REQUIREMENTS	Alkaline resistant overalls, or similar body-covering protective clothing.
RESPIRATORY REQUIREMENTS	Use an SABS approved mist respirator where spray mist occurs. Observe OSHA regulations for respirator use.

9. PHYSICAL AND CHEMICAL PROPERTIES

PURE SUBSTANCE OR PREPARATION	Preparation
PHYSICAL FORM	Liquid
APPEARANCE / ODOUR	Colourless to hazy liquid. No significant odour
pH AS IS	> 11
SOLUBILITY IN WATER	Soluble
RELATIVE DENSITY	Approx 1.25
VISCOSITY	200 to 5000 cps @ 20 °C
VOLATILE ORGANIC COMPOUNDS	Not applicable
AUTOFLAMMABILITY	Not applicable
FLASH POINT	Not applicable
EXPLOSION PROPERTIES	Not applicable

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10. STABILITY & REACTIVITY

STABILITY	Stable
MATERIALS AND CONDITIONS TO AVOID	<p>Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas. May react with Aluminium, Zinc, Tin and their alloys evolving Hydrogen gas. Dilute solutions of less than 10% have zero or minimal effect on these metals. If arc welding is carried out on vessels containing silicate solutions electrolysis may occur. Circuits must not be completed through pipes containing valves, bolted flanges or threaded joints.</p> <p>Food or dairy residues may contain sugars which under certain conditions may react with alkaline materials evolving carbon monoxide. Ensure adequate ventilation before entering confined spaces.</p>
HAZARDOUS DECOMPOSITION PRODUCTS	None known.

11. TOXICOLOGICAL INFORMATION

The primary hazard of AgriSil by all routes is it's alkalinity.

INGESTION	The toxicity of AgriSil is dependant on the Silica to alkali weight ratio and on the pH. LD50 oral rat values are in the range of 1300 - 2000mg/kg.
INHALATION	Unless the solution is sprayed or otherwise becomes an airborne aerosol, inhalation is unlikely. Irritation of airways is the likely effect.
EYE CONTACT	Severely irritating. May cause severe damage to eyes.
SKIN CONTACT	Irritating to skin

12. ECOLOGICAL INFORMATION

This material is not persistent in aquatic systems, but its high pH when undiluted or unneutralized 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 bioaccumulate except in species that use silica as a structural material such as diatoms and siliceous sponges. Neither silica nor potassium will appreciably bioconcentrate up the food chain. Sinks and mixes with water. Only water will evaporate from this material.

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Water

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS

Waste disposal should be in accordance with existing Community, National and local regulations.

14. TRANSPORT INFORMATION (See also Section 9)

Pack only in plastic or steel drums, tanks or tankers. Do not use Aluminium.
Not classified as dangerous goods under the United Nations Transport Recommendations.

ADR / RID	Not applicable
CEPIC TREMCARD NUMBER	Not applicable
HAZCHEM CODE	None
KEMMLER CODE	Not applicable
IMDG / IATA CLASSIFICATION	Not applicable
U.N. NUMBER (S.I.N.)	Not applicable
U.N. CLASS, PACKING GROUP	Not applicable

15. REGULATORY INFORMATION

EEC HAZARD CLASSIFICATION	Irritant in terms of the EEC "Dangerous Substances Directive" 67/548/EEC as ammended by 92/32/EEC
RISK PHRASES	R41, R38
SAFETY PHRASES	S2, S26, S27, S37/39

Reference should be made to any relevant local or national health, safety, and environmental legislation. This information does not constitute indication of suitability for specific uses.

16. OTHER INFORMATION

MSDS DATE: 2007-06-01

FOR REGULATORY INFORMATION CONTACT:

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