

# MSDS Plant Marshal 8000

Date prepared 03/06/2014

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Plant Marshal 8000  
Product description: Special blend potassium silicate solution  
Product use: Foliar and root application to plants  
Manufacturer: Fire protection Chemicals (Pty) Ltd  
Address: 6 Kobie Krige street, Krugersdorp, 1739  
Phone: 082 850 4834

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

	Wt. %
Water	68.9
Silicic acid, potassium salt, potassium silicate	31.1

## 3. HAZARDS IDENTIFICATION

Emergency Overview: Clear to hazy, colourless, odourless, thick liquid. Causes mild irritation, slight skin irritation and digestive tract irritation. Spray mist causes irritation to respiratory 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 mild irritation to the eyes.

Skin contact: Causes slight irritation to the skin.

Inhalation: Spray mist irritating to respiratory tract.

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.

## 4. FIRST AID MEASURES

Eyes: 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.

## 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.

Hazardous Combustion

Products: Not available

Explosion Data:

Sensitivity to mechanical impact and static discharge: Not available

## 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.

Small spill cleanup: Mop up and neutralise liquid, dispose in accordance with state, provincial and local regulations or permits.

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

## 7. HANDLING AND STORAGE

Handling: 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.

Storage: Keep containers closed. Store in clean steel or plastic containers. Separate from acids, reactive metals and ammonium salts. Storage temperature 0-95°C. Loading temperature 45-95°C. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

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

Eye protection: Wear chemical goggles.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Thick liquid.

Colour: Clear to hazy white.

Odour: Odourless or musty odour.

Odour Threshold: Not available

pH: 11.3

Specific gravity: 1.26 g/cm<sup>3</sup> (20°C)

Solubility in water: Miscible.

Flashpoint: Not applicable

Auto-ignition Temperature: Not applicable

Vapor Pressure: Not applicable

Vapor Density: Not applicable

Evaporation Rate: Not applicable

Boiling Point: Not applicable

Freezing Point: Not applicable

Coefficient of water/oil

Distribution: Not applicable

## 10. STABILITY AND REACTIVITY

Stability: This material is stable under all conditions of use and storage

Conditions to avoid: None

Materials to avoid: Gels and generates heat when mixed with acid. May react with 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

## 11. TOXICOLOGICAL INFORMATION

Acute data: When tested for primary irritation potential, this material caused moderate irritation to the eyes and slight irritation to the skin. Human experience indicates that irritation occurs when potassium silicates get on clothes at the collar, cuffs or other areas where abrasion may occur.

The acute oral toxicity of this product has not been tested.

Subchronic data: The subchronic toxicity of this material has not been tested

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: Not available

Environmental fate: This material does not bioaccumulate except in species that use silica as a structural material such as diatoms and siliceous sponges.

Physical/Chemical: Sinks and mixes with water. Only water will evaporate from this material.

## 13. DISPOSAL CONSIDERATIONS

Disposal method: Dispose in accordance with state, provincial and local regulations.

## 14. TRANSPORT INFORMATION

This material is not regulated hazardous material for transportation.

## 15. REGULATORY INFORMATION

FDA: Potassium silicate is regarded as GRAS (Generally Recognized As Safe) as a corrosion preventative in potable water.

## 16. OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fire Protection Chemicals be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fire Protection Chemicals has been advised of the possibility of such damages. Personnel using this product must be trained and advised on the best, safest and most effective means of application.