

# Potassium silicate (072606) Fact Sheet

## Summary

Potassium silicate is a naturally occurring compound that is not expected to have adverse effects on humans or the environment when used as a fungicide, insecticide or miticide. Use of this compound in pesticide products may provide an alternative to more toxic fungicides currently on the market.

### I. Description of the Active Ingredient

Potassium silicate is the potassium salt of silicic acid, and, in formulation, is readily absorbed by the plant. Silicon comprises 32% of the Earth's crust, and silicic acid salts (silicates) are the most common form of silicon. Consequently exposure to silicates is widespread in activities involving contact with soil and natural water. The other part of the chemical, potassium is a required element for survival of both plants and animals, as is silicon.

### II. Use Sites, Target Pests, and Application Methods

- **Use Sites:** Agricultural crops, fruits, nuts, vines, turf and ornamentals.
- **Target Pests:** mites, whiteflies, and other insects.
- **Application Methods:** Conventional spray application equipment should be used in the field.

### III. Assessing Risks to Human Health

Information submitted to support the registration application of the technical grade active ingredient and the end-use product adequately satisfies the food and non-food use requirements set forth in 40 CFR 158.690 (c) for biochemical pesticides. The overall toxicological risk from human exposure to potassium silicate is negligible. The Agency has considered potassium silicate in light of the relevant safety factors in FQPA and FIFRA. A determination has been made that no unreasonable adverse effects to the U.S. population in general, and to infants and children in particular, will result from the use of potassium silicate when label instructions are followed.

### IV. Assessing Risks to the Environment

The use of potassium silicate was unlikely to result in any adverse effects to the environment or non-target organisms for the aforementioned uses.

### V. Regulatory Information

All data requirements have been fulfilled and/or waived by the Agency and the Biopesticides and Pollution Prevention Division approved unconditional registration of products which contain potassium silicate as their sole active ingredient. An exemption from the requirement of a tolerance for the pesticide ingredient, potassium silicate was granted so long as potassium silicate is not applied at rates greater than 1.0% by weight in aqueous solutions.

## **VI. Registrant Information**

PQ Corporation  
P.O. Box 840  
Valley Forge, PA, 19482-0840

## **VII. Additional Contact Information**

[Ombudsman, Biopesticides and Pollution Prevention Division](#) (7511P)  
Office of Pesticide Programs  
Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460