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PQ Corporation is a leading producer of silicate, zeolite, and other performance materials serving the detergent, pulp and paper, chemical, petroleum, catalyst, water treatment, construction, and beverage markets. It is a global enterprise, operating in 19 countries on five continents, and along with its chemical businesses, includes Potters Industries, a wholly owned subsidiary, which is a leading producer of engineered glass materials serving the highway safety, polymer additive, metal finishing, and conductive particle markets.

Report 24

AgSil® Potassium Silicate:
Soluble Silicate for Agriculture

AgSil® potassium silicate offers growers these performance benefits in many agricultural applications:

- Provides resistance to mineral stress.
- Decreases climate stress.
- Improves strength.
- Increases growth and yield.

AgSil® potassium silicate helps plants to resist toxicity from phosphorous, manganese, aluminum, and iron, and increases tolerance to salt[1]. AgSil® potassium silicate also aids in resistance to drought by reducing water loss, and in some cases it may increase growth and yield[1-5].

Application of AgSil® potassium silicate improves leaf erectness, reduces susceptibility to lodging in grasses, and improves photosynthesis efficiency[1]. For turf this can result in faster, healthier greens and athletic fields. Row crops, vine crops, ornamentals, and hydroponically grown plants can all benefit from potassium silicate supplementation.

AgSil® potassium silicate provides a soluble source of silicate and supplementary potassium for plants.

Product	$\%K_2O$	$\%SiO_2$	$\%H_2O$	Description
AgSil 21	12.7	26.5	60.9	liquid, pH 11.7
AgSil 25	8.3	20.8	70.9	liquid, pH 11.3
AgSil 16H	32.4	52.8	14.8	hydrous powder

Hydrous AgSil® potassium silicate powders can be used in dry mix applications for land spreading. They may also be dissolved in other formulations (subject to compatibility) where additional water is not desired.

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5/08

Approximate AgSil® potassium silicate applications levels

Nutrient Solution — 100 ppm SiO_2

	AgSil 21	AgSil 25
lb. (fl. oz.) in 100 gal. H_2O	0.32 lb. (3.5 oz.)	0.40 lb. (4.9 oz.)
ppm K_2O	48	40

Foliar Spray — 1,000 ppm SiO_2

	AgSil 21	AgSil 25
lb. (fl. oz.) in 100 gal. H_2O	3.2 lbs. (35 oz.)	4.0 lbs. (49 oz.)
ppm K_2O	485	400

Warning: Call for information on tank-mixing compatibility.

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