

# ZACLON LLC

## ZACSIL<sup>®</sup> E200

### ELECTRONICS GRADE SOLUTION ULTRA PURE POTASSIUM SILICATE SOLUTION

Zacsil E200 potassium silicate is an ultra pure aqueous solution developed specifically for the electronics industry. It is the highest purity potassium silicate available. This solution contains extremely low levels of metallic impurities. Zacsil E200 is crystal clear solution with the highest possible level of light transmission and the lowest possible turbidity. The Chemical Abstracts index name for potassium silicate is silicic acid, potassium salt, and the CAS Registry Number is 1312-76-1.

### USES

Zacsil E200 is the ideal product for electronic applications where very low levels of metals such as Nickel, Copper, Iron and Sodium are critical. It is used as a binder for phosphor screens, flat panel displays and in projection systems. E200 is also used in wafer polishing where again high purity is essential.

Although developed and targeted for the high purity needs of the electronics industry, E200 should also be the potassium silicate of choice for any process where ultra high purity is desired. Some of these uses include binding in fuel cells, wood treatments, high temperature coatings and photographic applications.

### PROPERTIES

#### Specifications and Typical Properties\* Zacsil E200 Solution

Typical Properties	Limits	Typical
Baume @ 60 degrees F	30.3 – 30.8	30.55
Ratio SiO <sub>2</sub> / K <sub>2</sub> O	2.05 – 2.15	2.1
Silicon Dioxide	18.78 – 20.54	19.66
Potassium Oxide	9.16 – 9.56	9.36
Turbidity, NTU	3.0 Max	1
Iron as Fe (PPM)	30	10
Copper (PPM)	0.06	0.05
Nickel (PPM)	1	0.5

(\*) This table contains properties based on historical production performance. Zaclon does not make any express or implied warranty that all future production will demonstrate or continue to demonstrate these typical properties.

## STORAGE AND HANDLING

Carbon-steel tanks, pipes and equipment are generally suitable for storage and handling of potassium silicate solutions. Cast-iron or steel rotary gear or centrifugal pumps are recommended for potassium silicate solution transfer.

The freezing point of liquid silicate solutions is very close to that of water. Storage tanks and transfer equipment must be designed or located to prevent freezing. Drums should be stored in a heated area. If the solution is exposed to temperatures below 32 F (0 C), move the container to warm storage until thawed and mix thoroughly before using.

All spills of potassium silicate solutions should be washed away immediately to a chemical sewer with large volumes of water to avoid slippery footing. Prompt action is recommended because spills can build up layers and become more difficult to remove later.

## SHIPPING CONTAINERS

Zaclon ships Zacsil E200 Solution in 55-gallon non-returnable plastic drums containing net weights of 550 Lbs. (281 kg). Bulk delivery in tank trucks and totes are also available upon request.

Potassium Silicate is not regulated as a hazardous material by the United States Department of Transportation\*.

- Due to the changing governmental regulations such as those of the Department of Transportation, Department of Labor, U.S. Environmental Protection Agency, and the Food and Drug Administration, references herein to governmental requirements may be superceded. Each user should consult and follow the current governmental regulations, such as Hazard Classification, Labeling, Food Use Clearances, Worker Exposure Limitations, and Waste Disposal Procedures for the up-to-date requirements for potassium silicate.

**Notice: Potassium silicate solutions may irritate the eyes and skin.  
See personal safety and first aid information on MSDS Sheet.**

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## CONTACTING ZACLON LLC

**For placing orders or requesting additional product information, please contact us as shown below.**

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