

# Liquid Silicate

Cathedral Stone Products has developed a clear potassium silicate coating, Liquid Silicate, for use on all masonry/mineral surfaces. 92% vapor permeable when applied directly to masonry. Withstands extreme climate conditions and is a water repellent. Similar coatings have been used in Europe for over 160 years and are now produced for the first time in North America. Cathedral Stone's Liquid Silicate combines the advantages of silicate/mineral and silicone coatings. Unlike clear latex and acrylic coatings, Liquid Silicate forms a molecular bond with the masonry substrate.

## Features and Benefits

- Permanently bonds to masonry
- Will never peel
- 92 perm rating (elastomeric/acrylic = 7-8 perm)
- UV resistant
- Protects steel reinforcement
- Non-flammable
- Not affected by freeze/thaw
- Water Repellent
- No VOCs
- Hinders biological growth

## Application Procedures

### Surface Preparation

Liquid Silicate should only be used by experienced users. Liquid Silicate can be applied to any sound masonry or plaster surface. (Do not use on wood, plastic, or apply over oil or gloss coating.) The surface must be clean, solid, dry, and free from efflorescence. The surface must be completely dry at the time of application. Liquid Silicate is designed for vertical surfaces only. Horizontal surfaces, especially where water can pool, are not suitable for application. Cracks and spalls must be repaired and cured before coating. Cracks can be filled with Jahn M30 or M40 mortars. To ensure even penetration of the coating, make sure repairs use materials that are compatible to the substrate. Temperature (ambient and substrate) must be at least 45° F (8° C) and below 90° F (32° C). Do not apply when precipitation is expected within 48 hours of application. Do not apply when the temperature is expected to reach the dew point within 24 hours. Protect adjoining surfaces from splashes. Liquid Silicate can only be removed while wet. Once Liquid Silicate dries it CANNOT be removed.

### Preparing

Do not mix Liquid Silicate with water. Stir Liquid Silicate in its container with a drill prior to use.

### Application

Substrate absorption definition: The absorption must not be too high or too low for the coating to be applied correctly. Absorption can be tested by applying small amounts of water (drops) on the vertical surface to be coated.

Low absorption can be defined as water laying or beading on the surface of the substrate (masonry must be etched in cases of low absorption).

High absorption can be defined as water being absorbed so quickly that all traces of water seem to disappear rapidly.

Normal absorption can be defined as the water absorbing into the substrate without beading on the surface.

Protect all areas not to be coated prior to application. Substrate must be completely dry before coating. Do not work when precipitation is expected within 48 hours of installation. The coating needs adequate time to bond to the substrate and moisture disrupts this curing process. Apply liberally and spread well, filling all pores and cracks. Work wet into wet. Liquid Silicate should be applied with a short bristle brush. Brushing increases the absorption of the coating into the masonry, resulting in a longer lasting, more durable coating.

Spraying and rolling the coating is possible. Allow the first coat to dry for at least 12 hours. Apply a second coat in the same fashion; work wet into wet.

## Important Points

- Make sure the substrate is completely dry and there is no expected dew
- Protect coatings from all forms of moisture: rain, dew, snow, etc. for 48 hours.
- Temperature must be at least 45°F (8°C)
- Do not add water to Liquid Silicate
- Always work wet into wet
- It is best to apply directly to masonry.

## Clean Up

Place tools immediately in clean water when pausing work (15-30 minutes or more). Clean tools with clean water immediately after finishing work. Dried Liquid Silicate is insoluble in water. Liquid Silicate can be removed from non-porous surfaces with clean water while still wet.

## Packaging

Consists of 25 kg of Liquid Silicate in a 6-gallon plastic pail.

## Coverage

Coverage depends on the absorption and structure of the substrate. Determine coverage with a trial application.

One unit of Cathedral Stone's Liquid Silicate (approx. 5.0 gallons) will cover approx. 1200 sq. ft. for a single coat and approx. 750 sq. ft. when two coats are applied.

## Safety Information

Eye protection should be worn during mixing to protect from splashing. Avoid contact with skin and mucous membranes. Work in well ventilated areas.

## Storage and Shelf Life

This product must be stored at temperatures above freezing and below 78°F -- and at low humidity. DO NOT ALLOW PRODUCT TO FREEZE. Do not store in direct sunlight. The shelf life of an unopened container is 1 year.

After use, fully seal any unused portion in its original container prior to storage. If the product was previously opened or was stored longer than a year, test in an inconspicuous location for effectiveness.

## Warning

Not for internal consumption. Keep out of the reach of children and animals.

Notice: The information contained herein is based on our own research and the research of others, and it is provided solely as a service to help users. It is believed to be accurate to the best of our knowledge. However, no guarantee of its accuracy can be made, and it is not intended to serve as the basis for determining this product's suitability in any particular situation. For this reason, purchasers are responsible to make their own tests and assume all risks associated with using this product.