

## Silicate Coating

### Mineral-type paint based on potassium silicate

Mineral-type paint based on potassium silicate with excellent properties on mineral surface substrates and high resistance to weather influences. Highly permeable to water vapor. For coloration, special pigments are used with high covering power and strong resistance to ultraviolet rays.

## Recommended uses

Suitable for decoration and restoration of mineral surface facades (cement or sand renders, concrete, natural stone...) in historical buildings, monuments, etc. Substrate must be cured and completely dry.

Old layers of oil-based or dispersion paints, which form films, must be completely removed.

Carefully protect all surfaces sensitive to alkalinity, such as glazed windows, aluminum, glass, marble, etc.



## Technical characteristics

Concept	Value
Specific weight (g/cm <sup>3</sup> at 20°C)	1.45 ± 0.05
Viscosity (cps)	RVT 8000 – 12000
Finish	Mate
pH	10.5
Touch dry (min)	30
Recoat time (hours)	6 – 8
Coverage (m <sup>2</sup> /kg)	3 – 4 (depending on substrate conditions)

## Silicate paint application guidelines

**SUITABLE SUBSTRATES:** Mineral-origin substrates (including gypsum)

<b>DUAL SYSTEM:</b> Silicate-based primer	Silicate emulsion paint
- Substrate preparation	- Final topcoat
- Paint thinner	- White / colored
- Transparent	

### Step 1: Substrates preparation

- Surfaces must be dry and clean, free from any material that may hinder adhesion (grease, dirt, algae, etc.).
- New renders: Let cure for 2–4 weeks before applying the system.
- Renders with efflorescence or chalking: scrape off and remove dust residues.
- Old paint coatings:
  - Remove weak coatings by stripping, brushing, or water jet.

- Well-adhered coatings should be cleaned, especially if chalking, with brushing or pressure washing.
- Sintered glossy layers must be dulled using fluorosilicate and then rinsed with water (to allow silicate paint penetration).

## Step 2: Substrate repair

- Repair plaster must match the original in strength and texture.
- Repaired areas must be cured and dry before painting.
- For dark colors, and to avoid tonal differences, restoration renders should be treated beforehand with fluorosilicates.
- Small cracks, fissures, and other surface damages can be repaired using an on-site mixture of silicate emulsion paint and sand (or primer if no silicate paint is available).

## Step 3: Priming

### GOAL: ACHIEVE REGULAR ABSORPTION = UNIFORM COLOR

- Use silicate primer on all substrates.
- Alternative preparation: mixture of primer, water, and finish paint in 1:1:1 ratio.
- Silicate primer is suitable for all mineral surfaces **except gypsum**.
- GYPSUM: Use "Silicate Gypsum Primer", pure, with organic content from the emulsion below 5%.
- $\text{CaSO}_4 + \text{H}_2\text{O} + \text{nSiO}_2 \cdot \text{K}_2\text{O} \longrightarrow \text{nSiO}_2 \cdot \text{CaO} + \text{K}_2\text{SO}_4$

### GOAL: SUBSTRATE CONSOLIDATION

- Primer is also used to:
  - Consolidate eroded and low-compact renders.
  - Prevent excessive paint absorption in aerated concrete.
- Drying time: Minimum 12 hours between primer and paint coat (at 20°C and 65% relative humidity).

## Step 4: Paint application

### TOOLS: Short-nap roller, brush, airless sprayer (50°, 150–180 BAR)

- Apply to a substrate at least 4 weeks old.
- Protect adjacent surfaces from splashes.
- Apply with brush, short-nap roller, or airless sprayer.
- Apply two coats of the same product (primer and topcoat).
- Wait at least 24 hours between coats.
- Do not apply on hot walls or in direct sunlight.
- Do not apply in strong wind.
- Do not apply below 5°C or when night frost is expected.
- Do not apply to damp walls—remove moisture beforehand.
- Use protective goggles.

### Additional application tips:

- Paint can be diluted 5–10% with silicate primer/thinner.
- Apply wet-on-wet to avoid visible tone variations at overlaps (one operator applies, another spreads).
- Cut in around windows, cornices, eaves, etc.
- Touch-ups (scaffold contact points, baseboards) should be done with a round brush perpendicular to the Wall.
- Spread silicate paint evenly (do not apply thick layers).
- It is best to apply a single finishing coat.

## Common application defects

Defect	Cause
Uneven / Irregular color	Interrupted work, retouch marks
Surface stains	Non-homogeneous substrate / lack of pre-treatment
Crusts and efflorescence	Salt migration to surface via water
Adhesion problems	Unsuitable substrate, water-repellent treatment, release agents
Powdery surface	Too low application temperature, insufficient surface preparation
Glossy areas	Substrate moisture or excessive ambient humidity
Bands, streaks	Overheated substrate, direct sun, or warm wind during application

## Notes

- Never apply product below 5°C or with risk of rain.
- Store paint in a cool place, away from sunlight and extreme cold, in tightly sealed original containers.
- Recommended storage time: not more than 1 year.
- The information in this bulletin cannot be taken as a guarantee or subject to liability. Holcim España reserves the right to make technical advances to the product from its current state.