



sol-silicate photocatalytic product system

Golden Welcome Center Golden, Colorado

Creating a permanently self-cleaning facade protected against heavy weather, water infiltration, and air pollutants without fading, blistering or peeling for decades of service.



KEIM *Lasting Protection
& Preservation™*

Summary

Golden Welcome Center
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Golden, Colorado

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Applicator

Willow Creek Contractors LLC
5555 W 10th Ave
Lakewood, Colorado

Coating Surface

Acrylic-based simulated stucco

Surface Area

2,200 square feet

Product Budget

Soldalit ME photocatalytic sol-silicate coating system
\$3,906

KEIM silicate system cost

\$1.77 per square foot

Warranty for the coating system

15 years

Expected coating service life

+25 years on vertical surfaces

Coating Properties:

KEIM Soldalit ME photocatalytic sol-silicate mineral coating

- photocatalytic self-cleaning
- permanent chemical and mechanical bonds
- never fades
- never peel or blister
- repellent against wind driven rain
- highly vapor permeable
- remains clean
- incombustible
- lasts for decades

Project completed: September 2011





Surface Conditions



Troweling the thin simulated acrylic stucco layer leaves air bubbles between the sand grains. These bubbles are exposed over time as the thin layer weathers away. The magnified image at left helps us see how bubbles and sand grains become exposed. By capillary action, these smooth conical shaped pores allow water to enter the Portland stucco base underneath where destructive freeze/thaw cycles swell and crack the acrylic layer, opening the building to water intrusion, damp walls, and mold propagation.

Acrylic surfaces become statically charged by the wind, attracting dirt and pollutants that become permanently embedded in the soft acrylic layer through the heating and cooling of the façade. Acrylic finishes lose their nice appearance before their service life is reached.



Application

Surfaces were pressure washed to remove loose dirt and debris. The silicone caulk was removed that was previously applied to open cracks in the stucco façade to help keep water from infiltrating the wall assembly. Surfaces not to be coated were protected from accidental contact.

Application was by brush and roller. The base coat of KEIM Soldalit ME Grob was diluted 10 percent with Soldalit sol-silicate dilution to counter the absorbency of the weathered and now porous DAFS surface. The applicators worked the base coat into the surface to fill the pin holes and cracks with the Soldalit ME Grob mineral fillers. The top coat of Soldalit ME was applied undiluted full coverage. Water clean up.





Recoated DAFS (simulated acrylic stucco) surface

Light dapples the luminous mineral surface through the surrounding foliage bringing life to a static structure. As the movement of the sun throughout the day affects the color of light, the Soldalit ME mineral coating responds, absorbing and refracting sunlight in a magnificent display of light and shadow.





Why Golden Welcome Center chose KEIM

KEIM's Extraordinary Proven Performance

- ◆ KEIM silicate coatings are luminous, refracting light for soft even illumination across the surface. This natural phenomena brings out the natural beauty of the textured surfaces.
- ◆ Silicate coatings remain naturally clean without attracting dirt to the mineral surface. Photocatalysis breaks down air pollutants and tree sap maintaining sanitary surfaces—returns air quality benefits to the community.
- ◆ Periodic pressure washing unnecessary resulting in very low maintenance.
- ◆ Extremely vapor permeable, 77 perms, and water repellent keeps wall assemblies healthy and dry.
- ◆ Mineral pigment color will never fade.
- ◆ KEIM coating systems last 3 to 5 times longer than acrylic surface finishes.

Soldalit ME Grob harmonizes the weathered DAFS acrylic surface, renewing the appearance in just two coats.

Small mineral fillers fill and then protect the DAFS acrylic surface from weather without reducing vapor permeability.



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