



PROJECT PROFILE:

Point of France Condominiums
Edina, MN

Preformed Silicone Extrusions Provide Effective, Attractive Restoration of Window Perimeters

Sealant failures at window perimeters are inevitable over time. Even the best sealant materials have a finite service life. Aging and the elements take a toll. Joint design and joint sizing may play a role.

As the years go by, localized leaks may be addressed with spot repairs. Eventually, after repeated repairs, pinpointing the source of leaks becomes a challenge and a more comprehensive approach to sealant restoration is required. Complete sealant restoration removal and replacement, however, is time-consuming, disruptive and costly. For an owner-occupied upscale residential condominium in the affluent Edina community of Minnesota, Tremco's Spectrem® Simple Seal provided a solution that restored the aesthetic appeal of the building while providing a durable, continuous seal to keep weather out long-term.

CHALLENGE

Multiple Issues Made Restoration Problematic

Quast Consulting and Testing, Inc. (QCT), a firm specializing in the design and testing of exterior building components, evaluated the window perimeters and balcony interfaces at the Point of France 14-story condominium built in 1976. Isolated testing was done at the window perimeters and balconies to determine the root cause of the leaks. Localized repairs had been made over the years, creating a somewhat messy appearance. Additional issues contributing to the problem were improper joint sizing and joint design.

"The head-of-window had three different joints running parallel which needed to be sealed to be watertight - the flashing to stucco, the aluminum to flashing and the aluminum to aluminum at the window," noted Jon Denton

Consultant
Quast Consulting and Testing, Inc.
Contractor
American Masonry Restoration
Tremco Sustainable Building Solution
Spectrem® Simple Seal Extruded Silicone Bridge
Spectrem® 2 Silicone Sealant

of Quast. "The joint design was creating problems. The metal flashing was lapping over the face of the headstarter and did not have a backer rod or bond breaker tape. This in turn did not allow for thermal movements and caused sealant failures. At the corners where the window meets the vertical break metal, the flashing was most vulnerable."

"The vertical joints weren't properly sized and didn't have a return, Denton added. "Caulking requires 1/4-inch adhesion surface, but there was 1/8-inch or less. We would have had to use a bond breaker tape and apply the sealant onto the face of the frame."



Simple, Long-Lasting Solution
for a Leak-Free Building

Versatile Solution to On-Site Complications

In order to get a repair that could last 30 years or so, the job originally called for removal and replacement of the sealant. When looking at the conditions, though, the on-site foreman suggested Spectrem Simple Seal as a cost-effective alternative that would enable the three sealant joints at the head of the window to be covered with one seal; it would be aesthetically pleasing and blend in with the stucco façade. Simple Seal accommodates metal-to-metal joints that aren't flush, is highly flexible and allows movement behind it.

The contractor selected for the job, American Masonry Restoration in business since 1994, is one of the largest restoration contractors in the five-state area. While Simple Seal met performance and appearance requirements, Quast agreed to let American Masonry create a mockup for testing and so homeowners could see what was being proposed.

Simple Seal bronze was used to match the existing window frames in a 4-inch width for the window head and sills. For the vertical mullions and metal-to-metal joints, 1.5-inch wide material was used.

"To properly cut out the caulking where the stucco met the window to get a clean surface would have been a challenge," noted Jeff Carlson, project manager at American Masonry Restoration. "Using the Simple Seal, only a small amount of removal was required to get 1/2-inch of bite on the substrate."

Spectrem 2 Silicone Sealant was applied to each side of the area to be sealed with beads large enough to encapsulate the width of the ridges on each side of the extrusion for a secure bond when embedded into the wet sealant. The new seal is then placed right over the top of the old or failed sealant or caulk without having to scrape and dig out the old material, risking damage to the joint and substrate. Off-white sealant was used at the stucco and then rolled to give it texture. Particularly where the joint design and size are improper, the precured silicone extrusion will extend the life of the restoration. The silicone formulation also is resistant to UV exposure and weathering, so it will resist fading for decades.

Restoring Value, Appearance, Performance to a Valuable Real Estate Asset

Providing "peace of mind" to owners that the value of their real estate and residents' personal comfort have been restored is a priority; this is especially important for owner-occupied buildings. Spectrem Simple Seal not only saved time and disruption by eliminating the need to cut out the old sealant; it also extended the useful life of the solution, lowering maintenance and lifetime ownership costs while restoring the building's aesthetic appeal.

A key factor in the selection of Simple Seal for this project was the technical support provided by Tremco including product selection, pull tests, and job-site assistance. "On-site support is very important," noted Carlson. "Other similar products are available, but it is important to know that our Tremco technical sales representative is only a phone call away. He comes to the site, follows through and always responds if we need help."



Sealant Joints After



Sealant Joints Before



▲ Spectrem Simple Seal provided a cost-effective solution that enabled the three sealant joints at the head of the window to be covered with one seal.

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