

Customer

Bayley Place is a continuing care retirement community. It is a non-profit ministry of the Sisters of Charity of Cincinnati.

Challenge

Bayley Place had repeatedly experienced leak and maintenance issues due to failed polyurethane sealant in the building joints. The Bayley Place facility manager wanted a more durable remediation program to resolve the issue.

Solution

A three-part silicone system:

- Ultraspan Pre-Cured Silicone Weatherstrip
- Silpruf Silicone Sealant
- Silshield Elastomeric Coating

Results

The combination of the GE silicone products to bridge over the existing polyurethane sealant and coat the exterior provided the facility with a long-lasting remedial solution and refreshed the overall appearance.

Bayley Place, a continuing care retirement community, is a non-profit ministry of the Sisters of Charity of Cincinnati. It is part of a campus situated on 158 acres of beautifully maintained grounds overlooking the Ohio River in Cincinnati, Ohio.

A Three-Part Solution

Bayley Place had repeatedly experienced leak and maintenance issues due to failed polyurethane sealant in the building joints. The joints were cut out and re-caulked with polyurethane multiple times, but each time the polyurethane would degrade and the leaks would reappear. In spring 2003, the Bayley Place facility manager hired Houston Brothers Waterproofing Inc. to create a more durable remediation program to resolve the issue.

Houston Brothers knew from experience that the typical recommendation for this type of water problem---cutting out the old polyurethane sealant from the joints and resealing them using a silicone sealant in a standard joint configuration---might not be optimal in these circumstances. Removing old polyurethane sealant from exterior insulation finish systems (EIFS) joints and installing new sealant can be labor intensive and costly. EIFS can be easily damaged during the removal process and difficult to repair. Looking to provide the best solution for their customer, Houston Brothers called a representative for GE sealants. The representative examined the structure and proposed a solution that would prove to be faster, more effective and less expensive. The solution consisted of bridging over the existing failed polyurethane joints with UltraSpan* US1100 pre-cured silicone weatherstrip adhered with SilPruf* SCS2000 silicone sealant, and then coating the exterior with SilShield* SEC2400 silicone elastomeric coating.



Excellent System Compatibility

Some of the existing building joints were covered by a decorative metal extrusion. These existing metal joint covers were removed and over fifty rolls of two-inch, three-inch and four-inch wide UltraSpan weatherstrip were installed using SilPruf silicone sealant as the adhesive to provide a long-lasting flexible seal at these joint locations.

Designed as an alternative to cutting out and replacing failed building sealant, UltraSpan is a pre-cured, silicone rubber weatherstrip that can be used on EIFS, concrete, brick, glass, metal, wood and many other building materials



Case Study

"GE silicone products' good system compatibility enabled us to design a permanent remedial program that not only addressed the moisture related issues at Bayley Place but also enhanced its aesthetic appeal."

Don Neal

Project Superintendent

Houston Brothers Waterproofing Inc.

In addition to excellent performance benefits, GE sealants are compatible with other GE products including insulating, weatherproofing and structural grades series. When used together, GE sealants can provide excellent sealing performance, durability and long-lasting weatherability. The use of SilShield silicone coating, UltraSpan weatherstrip and SilPruf sealant reduces the tendency of the overcoated sealant area to change appearance from pick-up of dust or other atmospheric contaminants.

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in remedial sealing, flashing, roofing and numerous other applications. The low modulus property of UltraSpan weatherstrip can reduce stress on substrate surfaces when building joints experience expansion or contraction. UltraSpan weatherstrip has shown reduced dirt pick-up and features a special ribbed profile designed to control squeeze-out and improve bonding performance for a cleaner installation and neat appearance.

SilPruf is a medium-modulus, neutral-cure silicone sealant that can be used on a wide variety of materials in new or remedial applications. Its easy tooling, longer working time and color matching availability make SilPruf sealant a great candidate to consider for remedial applications. When cured properly, SilPruf sealant can exhibit excellent long-term resistance to natural weathering, including ultraviolet radiation, high and low temperatures, and rain and snow, with little change in elasticity.

Performance Combined with Aesthetics

One of the primary project requirements was that the remedial program be a long-lasting solution. A secondary requirement was to enhance the aesthetic value of the retirement community by refreshing the overall appearance of the faded color of the building. Don Neal, the project superintendent, determined that SilShield silicone coating would not only improve the weatherproofing ability of the overall structure by sealing smaller hairline cracks and small holes in the EIFS façade, but also provide the desired aesthetic.

SilShield is an elastomeric single-component silicone coating. It may be used primer-less on a wide variety of non-traffic horizontal and vertical surfaces such as concrete, urethane foam, wood, copper, EIFS, aluminum, glass and other painted surfaces. SilShield silicone coating can provide excellent ultraviolet and fade resistance and is breathable to allow the passage of water vapor.

An added benefit of Silshield silicone coating is that it can be made to order in custom colors. For this project, a rich red color of SilShield silicone coating was painted over the existing EIFS and white was chosen for the window sills & trim. A total of 1,380 gallons of SilShield silicone coating was used for this repair project. "GE silicone products' good system compatibility enabled us to design a permanent remedial program that not only addressed the moisture related issues at Bayley Place but also enhanced its aesthetic appeal," said Neal.



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