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AGENDA

01 EXISTING CONDITIONS

02 EXISTING FAILED SEALANT

03 CURRENT STATE

04 SOLUTION

05 PRODUCT INFORMATION



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SECTION 01
—
EXISTING CONDITIONS



PEARL STREET ELEVATION: 56 WINDOWS



OLIVER STREET ELEVATION: 40 WINDOWS

- 195 WINDOWS
- WINDOWS ARE PRIMARY SOURCE OF WATER INFILTRATION
- REQUEST IS FOR IMMEDIATE REPAIR OF FAILED SEALANT
- AT STAKE: PRESERVATION OF LANDMARK BUILDING
- CONSTRUCTION: ALLOWS US TO CONTROL A PROBLEM & MOVE FORWARD



FRANKLIN STREET ELEVATION: 99 WINDOWS





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SECTION 02
—
EXISTING FAILED SEALANT



DAMAGED WOOD SILL BLOCKING



FAILED PLASTER FINISH



DAMAGED DRYWALL



SPALLED PLASTER SUBSTRATE

EXISTING FAILED SEALANT: INTERIOR DETERIORATION AS OF 12/04/19



EXISTING FAILED SEALANT: INTERIOR DETERIORATION AS OF 12/04/19



SECTION 03
—
CURRENT STATE



DRYWALL REMOVED DUE TO MOLD AND WATER INFILTRATION



STUDS TO RECEIVE ROCKWOOL INSULATION AND DRYWALL



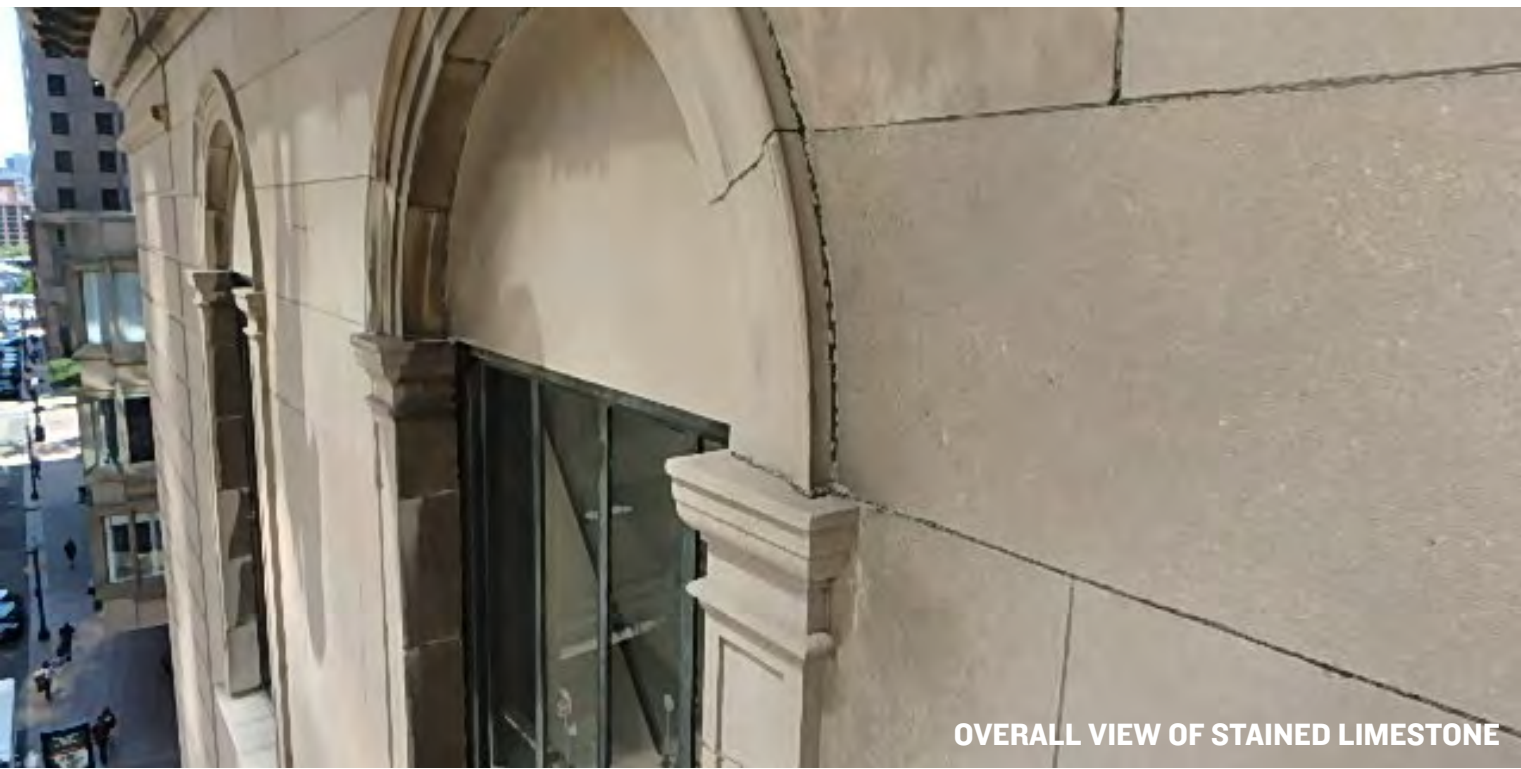
CURRENT STATE: INTERIOR CONSTRUCTION AT A STOPPING POINT WITHOUT REPAIR



EXTERIOR SEALANT FAILURE WITH SEALANT PULLING AWAY



STAINS ON LIMESTONE JAMB BLOCKS



OVERALL VIEW OF STAINED LIMESTONE



EXTERIOR SILL SEALANT FAILURE

CURRENT STATE: INTERIOR CONSTRUCTION AT A STOPPING POINT WITHOUT REPAIR



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SECTION 04
—
SOLUTION

LEVEL 2 TEST WINDOW FOR DOWSIL SEALANT & SEALANT TAPE (RIGHT)



STRAIGHT EDGE OF SEALANT TAPE DOWSIL 123 (RIGHT JAMB)



SOLUTION: DOWSIL 123 TAPE OVER SEALANT

CLOSEUP VIEW OF DOWSIL SEALANT 790/791/795 (LEFT JAMB)



STRAIGHT EDGE OF DOWSIL SEALANT 790/791/795 (LEFT JAMB)



SOLUTION: DOWSIL I23 TAPE OVER SEALANT

DOWSIL 790/791/795 SEALANT TO SASH LINE



SOLUTION: ENCAPSULANT APPLICATION - SEALANT



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SECTION 05
—
PRODUCT INFORMATION

Sealant Color Selection Guide

- Please check the availability of the different colors.
- Custom colors are available on request.
- Please refer to product literature for applications and technical information.

The colors shown are a close approximation of the actual sealant colors. However, for best results, submit color samples or swatches to our lab for color testing and matching.





Technical Data Sheet

DOWSIL™ 123 Silicone Seal

Preformed silicone seal for weatherproofing applications

Features & Benefits

- Economical, high-performance alternative to cutting-out and recaulking existing failed weatherproofing sealants
- Extremely low-modulus alternative to wet sealants
- High-movement seal capable of +200/-75 percent joint movement
- High-shear movement seal capable of handling specified live loads, wind sway and seismic movements in a properly designed joint
- SWRI-validated performance
- Ability to provide a complete weatherseal system when used with DOWSIL™ AllGuard Silicone Elastomeric Coating
- Available in custom designs to allow easier application and smoother transitions
- Available in matte and textured finish (similar to EIFS)

Composition

- Preformed silicone elastomer extrusion

Applications

DOWSIL™ 123 Silicone Seal is specifically designed for use in repair of failed construction joints and glazing details due to design error, field failure or when the life span of sealants and gaskets has expired. It can be used in a variety of applications such as:

- An economical, high-performance alternative to cutting-out and recaulking existing failed weatherproofing sealants
- A restoration joint on EIFS at both the EIFS-to-EIFS joints and window perimeter joints
- An aluminum splice in high-performance window and curtainwall applications
- A high-performance flexible flashing material ideal for maintenance crews
- A uniform-looking parapet or coping joint
- A leak-free transition seal
- A seal for leaking skylights

Description

DOWSIL™ 123 Silicone Seal is a preformed, ultra-low modulus silicone extrusion that is bonded to substrates using DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant.¹ Easy-to-install DOWSIL™ 123 Silicone Seal can be used in both new and remedial construction applications.

DOWSIL™ 123 Silicone Seal is available in the following standard colors: black, white, grey, bronze, limestone and sandstone. This product is also available in custom colors (1000 linear feet [305 m] minimum).

The same color of DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant should be used to bond the seal to the substrate.

In addition to standard and custom colors, DOWSIL™ 123 Silicone Seal is also available in a textured finish. The color or texture can also be altered at the job site using DOWSIL™ AllGuard Silicone Elastomeric Coating.

In addition to custom colors, DOWSIL™ 123 Silicone Seal is also available in custom extrusions with grooves to facilitate bending and dimensional shapes. These shapes may be custom designed to fit mullion and window systems and to work with the flat strips to provide improved aesthetics as well as maximum weatherproofing protection. Contact your sales application engineer to discuss your design concepts and learn how they can be captured in long-lasting silicone materials.

How to Use

DOWSIL™ 123 Silicone Seal must be bonded to clean, dry, frost-free, dust-free substrates using DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant. Field adhesion testing should be done to determine if primer is required for proper adhesion of DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant to the substrate.¹

1. Other DOWSIL™ sealants may be recommended depending on the installation requirements.

Preparation Work

Porous surfaces should be cleaned with abrasion cleaning followed by blasts of oil-free compressed air. If high-pressure water cleaning is necessary, use caution to prevent water from entering the structure through the existing failed joint. Exterior surfaces must be visibly dry before installing DOWSIL™ 123 Silicone Seal.

Nonporous surfaces should be cleaned using the two-cloth solvent wipe as outlined in our sealant application guidelines. Masking Apply masking tape in areas of high visibility to ensure good aesthetics (see Figure 2).



DOWSIL™ 795 Silicone Building Sealant

Neutral, one part silicone sealant

Features & Benefits

- Suitable for most new construction and remedial sealing applications
- Versatile – high performance structural glazing and weather sealing from a single product
- Available in 15 standard colors; custom colors also available
- Excellent weatherability virtually unaffected by sunlight, rain, snow, ozone and temperature extremes of -40°F (-40°C) to 300°F (149°C)
- Excellent unprimed adhesion to a wide variety of construction materials and building components, including anodized, alodined, most coated and many Kynar painted aluminums
- Ease of application – ready to use as supplied
- Ease of use – all temperature gunnability, easy tooling and low-odor cure byproduct
- Meets global standards (Americas, Asia and Europe)

Composition

- One-part, neutral cure, RTV silicone sealant

Applications

- Structural and nonstructural glazing
- Structural attachment of many panel systems
- Panel stiffener applications
- Weather sealing of most common construction materials including glass, aluminum, steel, painted metal, EIFS, granite and other stone, concrete, brick and plastics

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Test ¹	Property	Unit	Result
As Supplied			
ASTM C 679	Tack Free Time, 50% RH	hours	3
	Curing Time at 25°C (77°F) and 50% RH	days	7–14
	Full Adhesion	days	14–21
ASTM C 639	Flow, Sag or Slump	inches (mm)	0.1 (2.54)
	Working Time	minutes	20–30
	VOC Content ²	g/L	32

1. ASTM: American Society for Testing and Materials
2. Based on South Coast Air Quality Management District of California. Maximum VOC is listed both inclusive and exclusive of water and exempt compounds.



DOWSIL™ 790 Silicone Building Sealant

Ultra-low-modulus sealant for new and remedial construction joint sealing applications

FEATURES & BENEFITS

- Excellent performance even in building joints that experience extreme movement
- Suitable for new and remedial construction
- Extension/compression capability of +100/-50 percent
- Excellent weathering properties and resistance to sunlight, rain, snow, and temperature extremes
- Excellent unprimed adhesion to masonry, concrete substrates
- Easy application over a wide temperature range

COMPOSITION

- Ultra-low-modulus, one-part, neutral-cure silicone sealant

APPLICATIONS

DOWSIL™ 790 Silicone Building Sealant offers outstanding unprimed adhesion to masonry and is particularly effective for sealing expansion and control joints, precast concrete panel joints, Exterior Insulation and Finish Systems (EIFS) joints, curtainwall joints, mullion joints, stone pavers, and many other construction joints. When used in accordance with Dow application and testing recommendations, the sealant forms a durable, flexible, watertight bond with many common building materials, including combinations of stone, concrete, masonry, granite, marble, aluminum, painted substrates, and glass.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications.

Test	Property	Unit	Result
As Supplied			
ASTM C 679	Tack-Free Time, 50% RH	hours	1
	Curing Time, 50% RH, at 25°C (77°F), 3/8" depth	days	7–14
	Full Adhesion, cured joint	days	14–21
ASTM D 2202	Flow, Sag, or Slump		None
CTM 98	Working Time	minutes	10–20
EPA Method 24	VOC Content ¹ , maximum	g/L	23
As Cured – After 7 days at 25°C (77°F) and 50% RH			
ASTM C 661	Durometer Hardness, Shore A	points	15
ASTM D 412	Tensile Strength, maximum	psi (kg/mm ²)	100 (0.070)
ASTM C 794	Peel Strength	lb/in (kg/cm)	25 (4.46)
ASTM C 1135	Tensile		
	at 25% extension	psi (kg/mm ²)	15 (0.010)
	at 50% extension	psi (kg/mm ²)	20 (1.015)
ASTM C 719	Joint Movement Capabilities		
	Extension/Compression	%	+100/-50
ASTM C 1248	Staining, various substrates		None

- *ASTM: American Society for Testing and Materials.
 CTMs (Corporate Test Methods) correspond to standard ASTM tests in most instances. Copies of CTMs are available upon request.
¹Based on South Coast Air Quality Management District of California. Maximum VOC is listed both inclusive and exclusive of water and exempt compounds.

IMPORTANT TO NOTE

795, 791, AND 790 CAN ALL BE APPLIED IN BELOW FREEZING TEMPERATURES, PROVIDED THE SUBSTRATE IS FROST-AND MOISTURE-FREE

ALL OF THE DOWSIL SEALANTS CAN BE APPLIED TO SUBSTRATES WITHIN A TEMPERATE RANGE OF -20-120 DEGREES FAHRENHEIT

SURFACES MUST BE FREE OF MOISTURE, CONDENSATION, MORNING DEW AND FROST PRIOR TO INSTALLATION

THE MAIN DIFFERENCE BETWEEN THE THREE SEALANTS IS MODULUS AND HARDNESS

DAILY INSPECTIONS ARE STRONGLY RECOMMENDED TO REVIEW THESE COLD WEATHER CONDITIONS AND CORRECT WITH PROPER CLEANING. MAINTING A LOG, REVIEWING AND RECORDING LOW-TEMPERATURE START-UP CONDITIONS

DOW 123 SILICONE DOES NOT FADE WITH TIME/EXPOSURE - BUT LIKE ALL SILICONES IT WILL HOLD DIRT - ALWAYS BEST TO USE DARK COLOR

123 IS ADHERED TO SUBSTRATES WITH A DOWSIL SILICONE SEALANT



EXISTING CONDITIONS: MANSARD ROOF

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