Master Wall Guide Specification SSSMP
SUPERIORSHIELD SMP SEALANT

This guide specification is intended for use by the design/construction professional and any user of Master Wall® products to assist in developing project specifications for joint sealants on exterior code compliant concrete, concrete masonry (CMU) and frame wall construction.

SuperiorShield SMP Sealant bonds to most common construction materials including concrete, masonry, stucco, stone, steel, aluminum, wood, vinyl, and fiber cement. Use it for multiple joint sealant applications in Master Wall® proprietary wall systems and other wall assemblies:

- *Perimeter weather seal around windows, doors, scuppers, and other through wall penetrations*
- *Perimeter weather seal around fixture attachments*
- *Deflection joint sealant at floor lines*
- *Thermal expansion and contraction joints*
- *Control joints*
- *Panel-to-Panel joints between precast, metal frame, and other prefabricated wall construction*
- *Bedding sealant for flashing, flanged windows, and similar applications*
- *Air seal at interior or exterior joints and seams for air barrier continuity*

For complete technical information on Master Wall® components, Master Wall® Exterior Wall Systems, and other reference materials, refer to product bulletins, guide details, and other technical information available at www.masterwall.com

PART I – GENERAL

1.01 SUMMARY

A. Section Includes
   1. Liquid joint sealants

1.02 RELATED SECTIONS

Add/delete, depending on specific project requirements

A. Section 03 30 00 Cast-In-Place Concrete
B. Section 04 20 00 Unit Masonry
C. Section 07 24 00 Exterior Insulation and Finish Systems
D. Section 07 27 00 Air Barriers
E. Section 07 62 00 Sheet Metal Flashing and Trim
F. Section 08 40 00 Entrances, Storefronts, and Curtain Walls
G. Section 08 50 00 Windows

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1.03 REFERENCED DOCUMENTS

Add/delete depending on specific project requirements

A. AAMA Standards
   1. AAMA 808.3, Exterior Perimeter Sealing Compound

B. ASTM Standards
   1. ASTM C920, Specification for Elastomeric Joint Sealants
   2. ASTM C1193, Guide for Use of Joint Sealants
   3. ASTM C1330, Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants
   4. ASTM C1382, Test Method for Determining Tensile Adhesion Properties of Sealant When Used in Exterior Insulation and Finish Systems (EIFS or CIFS®) Joints
   5. ASTM C1521, Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints, ASTM E283, Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors under Specified Pressure Differences Across the Specimen
   6. ASTM E331, Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference

C. Federal Specification
   1. TT-S-00230C, Sealing Compound: Elastomeric Type, Single Component for (for Caulking, Sealing, and Glazing in Buildings and Other Structures)

D. South Coast Air Quality Management District (SCAQMD)
   1. Rule 1113, Architectural Coatings

E. US EPA (United Stated Environmental Protection Agency)
   1. 40 CFR Part 59, D, Code of Federal Regulations Title 40 Part 59, Subpart D – National Volatile Organic Compound Emission Standards for Architectural Coatings

1.04 SUBMITTALS

A. Sealant manufacturer's product data
   1. Surface preparation instructions
   2. Installation instructions
   3. Joint configuration guidance
   4. Color Samples
   B. Joint Sealant Schedule
      1. Location of joint sealants
      2. Joint sealant type, manufacturer, product name and color for each application

1.05 QUALITY ASSURANCE

A. Sealant Installer
   1. Provide evidence of a minimum of 5 years of experience installing sealants on exterior facades.
   2. Employ experienced work crews and supervisors who have worked on at least three projects of similar size and complexity to the Project.
   3. Provide at least 3 project references

B. Mockups
   1. Provide mockup of typical window/opaque wall perimeter joints, expansion joints, deflection joints, and other common joint conditions to verify installation methods and to conduct adhesion tests.

C. Testing
   1. Conduct field adhesion tests in accordance with ASTM C1521 Method A to verify adhesion. Conduct tests on primed and unprimed substrates and verify adhesion. In the event of inadequate adhesion refine surface preparation and/or priming, then re-test until satisfactory results are achieved.
   2. Conduct air leakage and water penetration tests in accordance with ASTM E283 and E331, respectively, as specified by design professional. Identify sources of leaks, make corrective actions, and re-test until sources of leaks are effectively repaired. Revise installation method as needed to prevent leaks.

D. Inspections
   1. Provide independent third-party inspection where required by code or contract documents.
   2. Conduct inspections in accordance with code requirements and contract documents.

1.06 DELIVERY, STORAGE AND HANDLING

A. Store sealant in in a cool (less than 80ºF [27ºC]), dry area in original unopened packaging. Protect from extreme heat [90°F (32°C)], freezing, wet areas, and direct sunlight. Store away from sources of ignition.

1.07 PROJECT/SITE CONDITIONS

Weather conditions affect application, drying time and curing requirements. Hot and/or wet conditions limit working time and accelerate drying and may require adjustments in application and scheduling to achieve desired results; cool and/or dry conditions extend working time and delay drying, and may require added measures of protection against wind, dust, dirt, rain and freezing.

A. Ambient and joint sealant substrate temperatures must be between 40° and 100°F (4 and 38°C) during application and drying period.
B. Joint sealant substrate must be minimum 5°F (2.8°C) above the ambient dew point temperature.
C. Joint sealant substrate must be free of frost and standing water.
D. Joint sealant substrate must be free of construction dust, dirt, airborne pollutants such as pollen, fumes, and any other surface contamination .
E. Installed joint sealant must not be exposed to water immersion.
F. Prevent exposure of joint sealant to fire and sources of ignition.

1.08 COORDINATION/SCHEDULING

The work in this section requires close coordination with related sections and trades. Sequence work to provide protection of construction materials from weather deterioration, damage from trades, surface contamination from airborne pollutants, construction dust, dirt, and debris.

A. Sequence work so joint sealant application occurs after completion of roofing.
B. Schedule joint sealant application upon completion of opaque wall and adjacent work such as window installation, scuppers, and similar through wall penetrations.
C. Schedule work to prevent installation of sealant at temperatures less than 40°F (4°C) or on frozen surfaces.
D. Schedule joint sealant work in shade or with scaffold covering to create shade.

1.09 WARRANTY

A. Provide manufacturer's standard limited warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Low modulus, non-sag, one-component silyl-terminated polyether joint sealant in conformance with ASTM C920: Type S, Grade NS, Use NT, A, M, Class 100/50 and tested in accordance with ASTM C1382.
   1. SuperiorShield SMP Sealant

2.02 ACCESSORIES

Supplied by others

A. Joint Substrate Primer
   1. 3M All Purpose Primer P591 (as needed)
   B. Joint Sealant Backing
      1. Outer weather seal: cylindrical non-absorbent bi-cellular polyethylene foam backer rod with outer skin in conformance with ASTM C1330, Type B.
      2. Inner air seal or Secondary Seal: cylindrical open cell polyethylene foam backer rod in conformance with ASTM C1330.

2.03 DESIGN REQUIREMENTS

Size and design joints for sealant in accordance with ASTM C1193.

2.04 PERFORMANCE REQUIREMENTS

A. Liquid joint sealant
   1. Sealant shall conform to physical and mechanical property requirements of ASTM C920 with minimum elongation and contraction capability of +100% and -50%.
2. Sealant shall be tested in accordance with ASTM C1382 for use with CIFS® & EIFS.

PART 3 EXECUTION

3.01 ACCEPTABLE INSTALLERS

A. Pre-qualify under Quality Assurance requirements of this specification (Section 1.7)

3.02 EXAMINATION

A. Examine joint surfaces for dust, dirt, debris or any other surface contamination, frost, chalkiness, laitance, or other weak surface conditions, proper dimensions, and uniformity of joint dimensions.
B. Notify General Contractor of any conditions that may interfere with proper application and/or performance of joint sealant.
C. Correct any deficient conditions.

3.03 SURFACE PREPARATION

The guidance below is general in nature. Individual project or substrate conditions may require special consideration and some substrates may require priming. Always conduct field adhesion tests to verify bond strength to substrates. Refer to ASTM C1521, Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints, for additional information.

A. Concrete: remove form release agent, ensure surface is clean, dry, and free of laitance or other weak surface conditions.
B. Masonry: wire brush to a sound, solid surface free of laitance or other weak surface conditions.
C. Galvanized Metal: solvent wipe with clean cotton cloth and allow to dry.
D. Aluminum: solvent wipe with clean cotton cloth and allow to dry.
E. Anodized Aluminum: solvent wipe with clean cotton cloth and allow to dry.
F. Wood (uncoated): ensure surface is clean and dry.
G. Fiber Cement (uncoated): ensure surface is clean and dry.
H. Stucco Casing Bead: solvent wipe with clean cotton cloth and allow to dry.
I. Portland Cement Stucco: ensure Portland cement stucco is clean, dry, and free of laitance or other weak surface conditions.
J. CIFS®/EIFS: seal to the properly installed base coat, making sure the CIFS®/EIFS reinforcing mesh is fully embedded and the surface is smooth and free of laitance or other weak surface conditions.

3.04 APPLICATION

A. Refer to ASTM C1193 for recommended application methods as applicable.
    1. Mask adjacent surfaces to avoid contact with sealant or primer.
    2. Where primer is needed apply to joint substrates in accordance with manufacturer's recommendations. When dry immediately install joint backing and joint sealant.
    3. Size and install joint backing for a compression fit inside the joint and to a uniform depth to produce an hourglass joint sealant configuration.
    4. Apply sealant in a continuous operation and in one direction with a premium high ratio caulking gun that is suitable for use with high viscosity materials to fill the joint.
    5. Tool while material is still wet, usually within 2-3 minutes of gun application and before the material forms a skin to ensure intimate contact with and wetting of the substrate(s).

6. Do not wet or apply soapy water to assist in tooling.
7. Remove masking tape immediately after tooling.
8. Remove any excess sealant from adjacent surfaces immediately.

3.05 JOB SITE CLEANUP

A. Clean work area in accordance with contract documents removing all excess materials, droppings, and debris. Clean adjacent surfaces.

3.08 PROTECTION

A. SuperiorShield SMP Sealant shall be protected from inclement weather and other sources of damage until dry and permanent protection in the form of flashings, sealants, etc. are installed.