

SECTION 07 9200

JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories.

1.02 REFERENCE STANDARDS

- A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2006 (Reapproved 2011).
- B. ASTM C794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants; 2015.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014.
- D. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems; 2000 (Reapproved 2011).
- E. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2013.
- F. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2008 (Reapproved 2012).
- G. ASTM C1311 - Standard Specification for Solvent Release Sealants; 2010.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on.
- C. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.

1.04 QUALITY ASSURANCE

- A. Maintain one copy of each referenced document covering installation requirements on site.
- B. Preconstruction Laboratory Testing: Arrange for sealant manufacturer(s) to test each combination of sealant, substrate, backing, and accessories.
 - 1. Adhesion Testing: In accordance with ASTM C794.
 - 2. Compatibility Testing: In accordance with ASTM C1087.
 - 3. Allow sufficient time for testing to avoid delaying the work.
 - 4. Deliver to manufacturer sufficient samples for testing.
 - 5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.
 - 6. Testing is not required if sealant manufacturer provides data showing previous testing, not older than 24 months, that shows satisfactory adhesion, lack of staining, and compatibility.

1.05 WARRANTY

- A. Correct defective work within a five year period after Date of Substantial Completion.
- B. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Nonsag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
 - 1. Adhesives Technology Corporation: www.atcepoxy.com.
 - 2. BASF Construction Chemicals-Building Systems: www.buildingsystems.basf.com.
 - 3. Bostik Inc: www.bostik-us.com.
 - 4. Dow Corning Corporation: www.dowcorning.com/construction.
 - 5. Fortifiber Building Systems Group: www.fortifiber.com.
 - 6. Franklin International, Inc.: www.titebond.com/sle.
 - 7. Hilti, Inc: www.us.hilti.com/#sle.
 - 8. Momentive Performance Materials, Inc (formerly GE Silicones): www.momentive.com.
 - 9. Pecora Corporation: www.pecora.com.
 - 10. The QUIKRETE Companies: www.quikrete.com.
 - 11. Tremco Global Sealants: www.tremcosealants.com.
 - 12. Sherwin-Williams Company: www.sherwin-williams.com.
 - 13. Sika Corporation: www.usa-sika.com.
 - 14. W.R. Meadows, Inc: www.wrmeadows.com.

2.02 JOINT SEALANT APPLICATIONS

- A. Scope:
 - 1. Exterior Joints: Seal open joints, whether or not the joint is indicated on the drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
 - a. Wall expansion and control joints.
 - b. Joints between door, window, and other frames and adjacent construction.
 - c. Joints between different exposed materials.
 - d. Openings below ledge angles in masonry.
 - e. Other joints indicated below.
 - 2. Do not seal the following types of joints.
 - a. Intentional weepholes in masonry.
 - b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
 - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
 - d. Joints where installation of sealant is specified in another section.
 - e. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use nonsag non-staining silicone sealant, Type _____, unless otherwise indicated.
 - 1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, non-curing; Type _____.
 - 2. Lap Joints between Manufactured Metal Panels: Butyl rubber, non-curing; Type _____.
 - 3. Control and Expansion Joints in Concrete Paving: Self-leveling polyurethane "traffic-grade" sealant; Type _____.

2.03 JOINT SEALANTS - GENERAL

2.04 NONSAG JOINT SEALANTS

- A. Type ____ - Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus 50 percent, minimum.
 - 2. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
 - 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
 - 4. Products:

- a. Dow Corning Corporation; 756 SMS Building Sealant: www.dowcorning.com/construction.
 - b. Dow Corning Corporation; 790 Silicone Building Sealant: www.dowcorning.com/construction.
 - c. Dow Corning Corporation; 791 Silicone Weatherproofing Sealant: www.dowcorning.com/construction.
 - d. Dow Corning Corporation; 795 Silicone Building Sealant: www.dowcorning.com/construction.
 - e. Pecora Corporation; 890NST Ultra Low Modulus Architectural Silicone Sealant - Class 100: www.pecora.com.
 - f. Pecora Corporation; 890FTS Field Tintable Ultra Low Modulus Architectural Silicone Sealant - Class 100: www.pecora.com.
 - g. Pecora Corporation; 890FTS-TXTR Field Tintable Textured Ultra Low Modulus Architectural Silicone Sealant - Class 50: www.pecora.com.
 - h. Pecora Corporation; 864NST Low Modulus Architectural Silicone Sealant - Class 50: www.pecora.com.
 - i. Pecora Corporation; 895NST Medium Modulus Structural Glazing & Weatherproofing Silicone Sealant - Class 50: www.pecora.com.
 - j. Sika Corporation; Sikasil WS-290: www.usa-sika.com.
 - k. Sika Corporation; Sikasil WS-295: www.usa-sika.com.
 - l. Sika Corporation; Sikasil 728NS: www.usa-sika.com.
 - m. Substitutions: See Section 01 6000 - Product Requirements.
- B. Type ____ - Silyl-Terminated Polyether (STPE) and Polyurethane (STPU) Sealant: ASTM C920, Grade NS, Uses M and A; single component; not expected to withstand continuous water immersion or traffic.
- 1. Movement Capability: Plus and minus 35 percent, minimum.
 - 2. Hardness Range: 20 to 40, Shore A, when tested in accordance with ASTM C661.
 - 3. Products:
 - a. Franklin International Inc.; Titebond WeatherMaster ULTIMATE MP Sealant: www.titebond.com/#sle.
 - b. Sherwin-Williams Company; Stampede 100 Low-Modulus Hybrid Urethane Sealant: www.sherwin-williams.com.
 - c. Sherwin-Williams Company; Stampede 1H Hybrid Sealant: www.sherwin-williams.com.
 - d. Substitutions: See Section 01 6000 - Product Requirements.
- C. Type ____ - Tamper-Resistant, Silyl-Terminated Polyether (STPE) and Polyurethane (STPU) Sealant: ASTM C920, Grade NS, Uses M and A; single component; not expected to withstand continuous water immersion or traffic.
- 1. Movement Capability: Plus and minus 12-1/2 percent, minimum
 - 2. Hardness Range: 50 to 60, Shore A, when tested in accordance with ASTM C661.
 - 3. Products:
 - a. Pecora Corporation; DynaFlex SC Polyurethane STPU Security Sealant: www.pecora.com.
 - b. Sika Corporation; SikaHyflex-150 LM: www.usa-sika.com.
 - c. Substitutions: See Section 01 6000 - Product Requirements.
- D. Type ____ - Non-Curing Butyl Sealant: Solvent-based; ASTM C1311; single component, nonsag, non-skinning, non-hardening, non-bleeding; vapor-impermeable; intended for fully concealed applications.

2.05 SELF-LEVELING SEALANTS

- A. Type ____ - Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
- 1. Movement Capability: Plus and minus 25 percent, minimum.

2.06 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Install bond breaker backing tape where backer rod cannot be used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

END OF SECTION