

SECTION 079200

JOINT SEALERS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Catalog sheets, specifications, and installation instructions for each product specified except miscellaneous materials.
- B. Samples:
 - 1. Sealants: One pint or standard tube.
 - 2. Joint Fillers: 24 inch long full section.
 - 3. Gaskets: 24 inch long full section.
 - 4. Joint Primer/Sealer/Conditioners: One pint.
 - 5. Backer Rods: 24 inch long full section.
 - 6. Bond Breaker Tape: 24 inch long full section.
- C. Quality Control Submittals:
 - 1. Installer's Qualifications Data: Affidavit required under Quality Assurance Article.

1.02 QUALITY ASSURANCE

- A. Installer's Qualifications: The persons installing the sealants and their supervisor shall be personally experienced in the installation of sealants and shall have been regularly employed by a company engaged in the installation of sealants for a minimum of two years.
 - 1. Furnish to the Director the names and addresses of five similar projects which the foregoing people have worked on during the past two years.
 - 2. Furnish a letter from the sealant manufacturer, stating that the foregoing people are authorized to install the manufacturer's sealant materials and that the manufacturer's specifications are applicable to the requirements of this Project.
- B. Container Labels: Include manufacturer's name, trade name of product, kind of material, federal specification number (if applicable), expiration date (if applicable), and packaging date or batch number.
- C. Test and validate sealants used for exterior weathersealing per the Sealant Waterproofing Restoration Institute (SWRI).
- D. Warranties:
 - 1. Silicone sealants: 20 years Weatherseal Warranty.
 - 2. Polyurethane or Silicone: 5 year Weatherseal Warranty.
 - 3. Sealants for Granite, Marble and Limestone: 20 year Non-Stain Warranty.

1.03 PROJECT CONDITIONS

- A. Environmental Requirements:
 - 1. Temperature: Unless otherwise approved or recommended in writing by the sealant manufacturer, do not install sealants at temperatures below 40 degrees F or above 85 degrees F for non silicone sealants and below minus 20 degrees F or above 125 degrees F for silicone sealants.
 - 2. Humidity and Moisture: Do not install the Work of this section under conditions that are detrimental to the application, curing, and performance of the materials.
 - 3. Ventilation: Provide sufficient ventilation wherever sealants, primers, and other similar materials are installed in enclosed spaces. Follow manufacturer's recommendations.
- B. Protection:
 - 1. Protect all surfaces adjacent to sealants with non-staining removable tape or other approved covering to prevent soiling or staining.
 - 2. Protect all other surfaces in the Work area with tarps, plastic sheets, or other approved coverings to prevent defacement from droppings.

PART 2 PRODUCTS

2.01 SEALANTS

- A. Type 1 Sealant, any of the following generic types:
 - 1. One-part, low-modulus silicone sealant: Dow Corning 790, Dow Corning 791, Dow Corning 795, General Electric Silpruf, Pecora 864, Pecora 890, Pecora 890FTS.
 - 2. One-part, non-sag silicone or polyurethane sealant: Bostik Chem-Calk 900, Bostik Chem-Calk 915, Bostik Chem-Calk 916 Textured, Bostik Chem-Calk 2020, Pecora Dynatrol I, Sika Sikaflex 1a, Sonneborn Sonolastic NP I, or Tremco DyMonic (not SWRI), Dow Corning Contractors Weatherproofing Sealant (CWS), Dow Corning Concrete Sealant (CCS), Pecora 895.
 - 3. Two-part, non-sag silicone or polyurethane sealant: Bostik Chem-Calk 500 (not SRWI), Pecora Dynatrol II, Dow Corning CWS or CCS.
- B. Type 1C Sealant:
 - 1. One-part, non-sag polysulfide base sealant: Pecora's Synthacalk GC-9, Products Research and Chemical's PRC Rubber Calk 7000, or Sonneborn's Sonolastic One Part Polysulfide Sealant.
- C. Type 2 Sealant: One-part acrylic polymer sealant; Pecora AVW-920, PTI 738, or Tremco Mono.
- D. Type 2A Sealant: One-part acrylic or elastomeric sealant for sealing small joints; PTI 200 or Tremco Small Joint Sealant, Pecora AC-20.
- E. Type 3 Sealant: One-part butyl rubber sealant; Pecora BC-158, PTI 707, or Bostik Chem-Calk 300 (not SWRI).

- F. Type 4 Sealant: One-part silicone sealant for high temperatures; Bostik 9732 High Temp Red, Dow Corning Silastic 736 RTV, Dow Corning High Temp, General Electric RTV 106.
- G. Type 6 Sealant (flexible security sealant):
 - 1. Two part, non-sag, 25% total joint movement, elastomeric polyurethane; Pecora Dynaflex.
 - 2. One-component 25% total joint movement, elastomeric, aliphatic, polyurethane; Pecora Dynaflex SC, Sonneborn Sonolastic Ultra.
- H. Pre-formed Sealant: Preformed paintable sealant strips of open cell, compressible urethane foam, saturated with non-drying, non-staining, and non-migrating butylene compound.
- I. Sealant Colors: For exposed materials provide color as indicated or, if not indicated, as selected by the Director from manufacturer's standard colors. For concealed materials, provide the natural color which has the best overall performance characteristics.

2.02 JOINT FILLERS

- A. Cork Joint Filler: Resilient, non-extruding type pre-molded cork units; ASTM D 1752, Type II.
- B. Expanded Polyethylene Joint Filler: Flexible, compressible, closed-cell polyethylene of not less than 10 psi compression deflection (25 percent).

2.03 GASKETS

- A. Adhesive Closed-Cell PVC Gasket: Closed-cell, flexible, self adhesive, non-extruding, polyvinylchloride foam gaskets; ASTM D 1667.

2.04 MISCELLANEOUS MATERIALS

- A. Joint Primer/Sealer/Conditioner: As recommended by the sealant manufacturer for the particular joint surface materials and conditions.
 - 1. For Type 6 Sealant (two part):
 - a. Pecora No. P-100 for non-porous substrates.
 - b. Pecora No. P-75 or P-200 for porous substrates.
 - 2. For Type 6 Sealant (one component):
 - a. Pecora No. P-100 for non-porous substrates.
 - b. Pecora No. P-75 for porous substrates.
 - c. Sonneborn No. 733 or 766 for porous or non-porous substrates.
- B. Backer Rod: Compressible rod stock of expanded, extruded polyethylene.
- C. Bond Breaker Tape: Polyethylene or other plastic tape as recommended by the sealant manufacturer; non-bonding to sealant; self adhesive where applicable.
- D. Cleaning Solvents: Oil free solvents as recommended by the sealant manufacturer. Do not use re-claimed solvents.

- E. Masking Tape: Removable paper or fiber tape, self-adhesive, non-staining.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine all joint surfaces for conditions that may be detrimental to the performance of the completed Work. Do not proceed until satisfactory corrections have been made.

3.02 PREPARATION

- A. Clean joint surfaces immediately before installation of sealant and other materials specified in this Section.
 - 1. Remove all loose materials, dirt, dust, rust, oils and other foreign matter that will impair the performance of materials installed under this Section.
 - 2. Remove lacquers, protective coatings and similar materials from joint faces with manufacturer's recommended solvents.
 - 3. Do not limit cleaning of joint surfaces to solvent wiping. Use methods such as grinding, acid etching or other approved and manufacturer's recommended means, if required, to clean the joint surfaces, assuring that the sealant materials will obtain positive and permanent adhesion.
- B. Set joint fillers at proper depth and position as required for installation of bond breakers, backer rods, and sealants. Do not leave voids or gaps between the ends of joint filler units.
- C. Priming Joint Surfaces:
 - 1. Prime joints which are to receive Type 1A and 1B Sealants.
 - 2. Prime joints which are to receive Type 6 Sealants.
 - 3. Prime joints which are to receive Type 7 Sealants.
 - 4. Prime joints of friable (crumbly, chalky) masonry surfaces which are to receive Type 1 Sealant.
 - 5. Prime joints other than those above if so recommended by the manufacturer's printed instructions.
 - 6. Do not allow the primer/sealer to spill or migrate onto adjoining surfaces.

3.03 JOINT BACKING INSTALLATION

- A. Install bond breaker tape in relaxed condition as it comes off the roll. Do not stretch the tape. Lap individual lengths.
- B. Install backer rod of sufficient size to fill the joint width at all points in a compressed state. Compress backer rod at the widest part of the joint by a minimum of 25 percent. Do not cut or puncture the surface skin of the rod.

3.04 SEALANT INSTALLATION

- A. Except as shown or specified otherwise, install sealants in accordance with the manufacturer's printed instructions.
- B. Install sealants with ratchet hand gun or other approved mechanical gun. Where gun application is impractical, install sealant by knife or by pouring as applicable.
- C. Types 2 and 2A Sealants: If low temperature makes application difficult, preheat sealants using manufacturer's recommended heating equipment.
- D. Finishing: Tool all vertical, non-sag sealants so as to compress the sealant, eliminating all air voids and providing a neat smoothly finished joint. Provide slightly concave joint surface, unless otherwise indicated or recommended by the manufacturer.
 - 1. Use tool wetting agents as recommended by the sealant manufacturer.

3.05 FIELD QUALITY CONTROL

- A. Test Samples:
 - 1. Where directed, for each 100 linear feet of joint installed, cut out and carefully remove a 6 inch long sample of the undisturbed sealant and joint backer material from the newly installed Work. Remove the samples in the presence of the Director's Representative who will retain them for evaluating and testing.
 - 2. Reseal cut out areas with the same materials.

3.06 CLEANING

- A. Immediately remove misapplied sealant and droppings from metal surfaces with solvents and wiping cloths. On other materials, remove misapplied sealant and droppings by methods and materials recommended in writing by the manufacturer of the sealant material.
- B. After sealants are applied and before skin begins to form on sealant, remove all masking and other protection and clean up remaining defacement caused by the Work.

END OF SECTION