SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes joint sealants.

1.2 ACTION SUBMITTALS

A. Product Data: Submit product data for each joint sealant product indicated.

B. Samples: Submit samples for each exposed joint sealant product indicated.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers. Store and handle materials in compliance with manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. VOC Content of Interior Sealants: Provide sealants and sealant primers for use inside the weatherproofing system that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Architectural Sealants: Not more than 250 g/L.
2. Sealant Primers for Nonporous Substrates: Not more than 250 g/L.
3. Sealant Primers for Porous Substrates: Not more than 775 g/L.

B. Colors: For fully concealed joints, provide the manufacturer's standard color of sealant which has the best overall performance characteristics for the application shown. For exposed joints, the Architect will select colors from the manufacturer's standard colors.

2.2 JOINT SEALANTS

A. Butt Glazing Sealant: Comply with ASTM C 920, Type S, Grade NS, Class 50; use NT, G, and A, black color unless otherwise indicated.

1. Products and Manufacturers: Provide one of the following:

    a. DOWSIL 795; Dow Chemical Company.
    b. Spectrem 2; Tremco, an RPM Co.
    c. Silpruf SCS 2000; Momentive.
    d. Sika, Sikasil WS 295.

B. Sealants for Contact with Food: Comply with 21 CFR 177.2600, NSF Standard 51 or USDA for use in meat and poultry processing plants, and ASTM C 920 for Type S, Grade NS, Class 25, Use NT.

1. Dow Chemical Company; 786 Silicone Sealant.
2. Pecora Corporation; 898 NST Sanitary Mildew Resistant Sealant.

C. Mildew-Resistant Silicone Sealant (use for joints at plumbing fixtures, toilet room countertops and vanities): Complying with ASTM C 920, Type S (single component), Grade NS (non-sag), class 25, Use NT (non-traffic), Substrate uses G, A, and O; and containing a fungicide for mildew resistance; white color.

1. Products: Provide one of the following:

    a. Dow Chemical Company; 786 Silicone Sealant.
    b. Momentive; Sanitary SCS 1700.
    c. Pecora Corporation; 898 NST Sanitary Mildew Resistant Sealant.
    d. Tremco, an RPM Co.; Tremsil 200 Sanitary.

D. Two-Part Polyurethane Sealant for Paving Applications:

1. For Paving Applications with Slopes not Exceeding 5% (Self Leveling): ASTM C 920, Type M, Grade P, Class 25; use T (except with a Shore A hardness of 35 or greater) and I (Class 1 or 2) for water immersion; and abrasion resistant; one of the following:

    a. Pecora Corporation; Urexpan NR-200.
    b. Tremco, an RPM Co.; Vulkem, 445SSL.
    c. Sika; Sikaflex 2c SL.

E. Latex Sealant: Complying with ASTM C 834, Type OP (opaque sealants):

1. Products: Provide one of the following:

    a. Pecora Corporation; AC-20 + Silicone.
    b. DAP Products Inc.; Alex Plus Acrylic Latex Caulk Plus Silicone.
    c. MBCC Group Master Builders Solutions (formally BASF); MasterSeal NP 520.
    d. Tremco, an RPM Co.; Tremflex 834.

2.3 JOINT-SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: One of the following preformed, compressible, resilient, nonstaining, nonwaxing, nonextruding backings of flexible plastic foam complying with ASTM C 1330, and of type indicated below. Select shape and density of cylindrical sealant backings in consultation with the manufacturer for proper performance in specific condition of use in each case.

1. Type C: Closed-cell polyethylene foam material with a surface skin, which is nonabsorbent to liquid water and gas, non-outgassing in unruptured state; one of the following:

a. HBR Closed Cell Backer Rod; Nomaco, Inc.
b. MasterSeal 920; BASF Master Builders.
c. Mile High Foam, Backer Rod Mfg., Inc.

2.4 MISCELLANEOUS MATERIALS

A. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants with joint substrates.

B. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and which will not stain nor mar the finish of surfaces adjacent to joints to which it is applied.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with the recommendations of joint sealant manufacturer and the following requirements:

1. Remove foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), existing joint sealants, oil, grease, water, and surface dirt.
2. Clean concrete, masonry, unglazed surfaces of tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
3. Remove laitance and form-release agents from concrete.
4. Clean metal, glass, porcelain enamel, glazed surfaces of tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

C. Installation of Sealant Backings: Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

D. Installation of Sealants: Install sealants so they directly contact and fully wet joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths that allow optimum sealant movement capability.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants to form smooth, uniform, concave shaped beads, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint.

F. Cleaning: Clean excess sealants or sealant smears adjacent to joints as installation progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.2 JOINT SEALANT SCHEDULE

A. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:

1. Control and Expansion Joints on Exposed Interior Surfaces of Exterior Walls: Latex sealant.
2. Perimeter Joints of Exterior Openings Where Indicated: Latex sealant.
3. Vertical Control and Expansion Joints in Stone and Tile Surfaces: Latex sealant.

4. Horizontal Control and Expansion Joints in Stone and Tile Flooring Surfaces: Two-Part Polyurethane Sealant for Paving Applications.
5. Vertical Control Joints on Exposed Surfaces of Interior Unit Masonry and Concrete Walls and Partitions: Latex sealant.
6. Joints on Underside of Precast Beams and Planks: Latex sealant.
7. Perimeter Joints between Interior Wall Surfaces and Frames of Interior Doors, Windows, and Elevator Entrances: Latex sealant.
8. Perimeter Joints between Scalloped, Bent, or Warped Interior Wallboard Surfaces and Straight Trim: Latex Sealant.
9. Joints between Plumbing Fixtures and Adjoining Walls, Floors, and Counters: Mildew resistant silicone sealant.
10. Joints between Glass, and between Glass and Adjacent Substrates: Butt glazing sealant.

END OF SECTION