SECTION 07900

JOINT SEALERS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Sealants and joint backing.

1.02 RELATED REQUIREMENTS

A. Section 08800 - Glazing: Glazing sealants and accessories.

B. Section 09260 - Gypsum Board Assemblies: Acoustic sealant.

1.03 REFERENCE STANDARDS

A. ASTM C 834 - Standard Specification for Latex Sealants.

B. ASTM C 919 - Standard Practice for Use of Sealants in Acoustical Applications.

C. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.

D. ASTM C 1193 - Standard Guide for Use of Joint Sealants.

E. ASTM D 1056 - Standard Specification for Flexible Cellular Materials--Sponge or Expanded Rubber.

F. ASTM D 1667 - Standard Specification for Flexible Cellular Materials--Poly(Vinyl Chloride) Foam (Closed-Cell).

G. ASTM D 2628 - Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for concrete Pavements.

H. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; www.aqmd.gov.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the work with other sections referencing this section.

1.05 SUBMITTALS

A. See Section 01350 - Submittals, for submittal procedures.

B. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

C. Samples: Submit two illustrating sealant colors for selection.

D. Manufacturer's Installation Instructions: Indicate special procedures, surface preparation, and perimeter conditions requiring special attention.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum 10 years documented experience.

B. Applicator Qualifications: Company specializing in performing the work of this section with minimum 10 years documented experience.

1.07 FIELD CONDITIONS

A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.08 WARRANTY

A. Correct defective work within a five year period after Date of Notice of Completion.

B. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal and watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 MATERIALS

A. Provide only products that are recommended and approved by the manufacturer for the specific use to which they are applied and with all requirements of the work under this Section.

B. For each generic product, use only materials from one manufacturer.

C. Provide only materials that are compatible with each other and with the joint substrate.

2.02 SEALANT TYPES

A. Type 1: FS TT-S-230; one-part polyurethane, non-sag. Approved Products:
   1. Pecora DYNATROL I-XL.
   2. Vulkem 116.
   3. Sikaflex - 15LM.

B. Type 2: FS TT-S-227; multi-part polyurethane, non-sag. Approved Products:
   1. Pecora DYNATROL II.
   2. Vulkem 922.

C. Type 3: FS TT-S-230; one-part polyurethane, self-leveling. Approved Products:
   1. Pecora UREXPAN NR-201.
   2. Vulkem 45.

D. Type 4: FS TT-S-227; multi-part polyurethane, self-leveling. Approved Products:
   1. Pecora UREXPAN NR-200.
   2. Vulkem 245/255.

E. Type 5: FS TT-S-1543; one-part silicone, non-sag, mildew-resistant, with movement capability of more than 25 percent but less than 50 percent in both extension and compression. Approved Products:
   1. Pecora 864 ARCHITECTURAL SILICONE SEALANT.

F. Type 6: ASTM C834; one-part acrylic, acoustical, non-sag, paintable, nonstaining, flame spread less than 25, smoke density less than 450 in accordance with ASTM E84. Approved Products:
   1. Pecora BA-98.

G. Type 7: ASTM C1085; one-part, butyl rubber, non-sag, solvent-release curing, polymerized, non-staining, paintable, with tack-free time of 24 hours or less. Approved Products:
   1. Pecora BC-158.

H. Type 8: FS TT-S-001543A and FS TT-S-00230C, ASTM C-920, one part Denver Foam Polyurethane, sanitary sealant.
   1. Pecora SANITARY SEALANT 898 SILICONE.
   2. Dow Corning, 786.

2.03 SEALANT COLORS

A. Colors for each sealant will be selected by the Architect, from standard colors normally available from the manufacturer. Should such standard color not be available from the approved manufacturer except at additional charge, provide all such colors at no additional cost or time to the Contract.

B. In concealed installations and in partially or fully exposed installations, where so approved by

the Architect, use standard gray or block color.

2.04 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: ASTM D1056; round, closed cell or open cell, polyethylene foam rod; oversized 25 to 50 percent larger than joint width, as recommended and approved by the manufacturer.

D. Masking Tape: Non-staining, non-absorbing, compatible with sealants and surfaces adjacent to joints.

E. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application. Apply to bottom of joints that are too shallow to receive foam backer rod.

F. Tooling Agents: Approved by the sealant manufacturer, non-staining to sealant and substrate.

G. All other materials not specifically described but required for complete and proper installation of sealants, shall be first quality or their respective kinds as selected by the Contractor, subject to approval of the Architect.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces and joint openings are ready to receive work.

B. Verify that joint backing and release tapes are compatible with sealant.

3.02 PREPARATION

A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean and prime joints in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions and ASTM C 1193.

D. Protect elements surrounding the work of this section from damage or disfigurement.

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 C 1193.

C. Perform acoustical sealant application work in accordance with ASTM C 919.

D. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.

E. Measure joint dimensions and size joint backers to achieve the following:
   1. Width/depth ratio of 2:1.
   2. Neck dimension no greater than 1/3 of the joint width.
   3. Surface bond area on each side not less than 75 percent of joint width.

F. Install bond breaker where joint backing is not used.

G. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

H. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

I. Tool joints concave.

J. Precompressed Foam Sealant: Do not stretch; avoid joints except at corners, ends, and intersections; install with face 1/8 to 1/4 inch below adjoining surface.

K. Compression Gaskets: Avoid joints except at ends, corners, and intersections; seal all joints with adhesive; install with face 1/8 to 1/4 inch below adjoining surface.

3.04 CLEANING

A. Clean adjacent soiled surfaces.

3.05 PROTECTION

A. Protect sealants until cured.

3.06 SCHEDULE

A. Exterior Joints:
   1. metal frames and concrete, masonry or plaster: Type 2.
   2. Joints between concrete, masonry, and exterior impervious materials: Type 2.
   3. Vertical expansion and a control joints: Type 2.
   4. Joints in sheet metals flashings: Type 2.
   5. Perimeters of metal or wood window frames, door frames, louvers and similar openings, and where metal, wood or other materials abut or join masonry, concrete or each other: Type 1 or 2.
   6. Horizontal expansion, control and abutment joints in sidewalks or concrete floors: Type 4. Similar joints where a self-leveling sealant cannot be used because of slope: Type 2.
   7. Cap beads on glass adjacent to metal or other silica substance surfaces: Type 5.

B. Interior Joints:
   1. Vertical expansion and control joints: Type 1.
   2. Joints between concrete, masonry and interior impervious materials: Type 1.
   3. Horizontal expansion, control isolation and abutment joints: Type 3 or 4.
   4. Perimeters of metal or wood widow frames, door frames, and where metal, wood or other materials abut or join masonry, concrete or each other: Type 1.
   5. Joints in gypsum board: Type 1.
   6. Perimeters of sinks and other fixtures in countertops: Type 5.
   7. Intersection of wall surface and cap strip at resilient flooring integral cove: Type 1.
   8. Intersection of metal or wood thresholds and floor substrate, where building components are mechanically attached and require sealing: Type 7.
   9. Perimeter of sound-rated walls, at intersection of gypsum board and abutting surfaces, both sides of wall: Type 6.
   10. Toilet Rooms: Type 8.

END OF SECTION