

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

SECTION 07900

JOINT SEALERS

PART 1: GENERAL

1.01 SECTION INCLUDES

- A. Furnish and install sealant and backing materials, including cleaning and preparation of joint surfaces, for the following applications:
 - 1. Pavement and sidewalk joints.
 - 2. Concrete construction, expansion and contraction joints.
 - 3. Masonry Expansion joints.
 - 4. Exterior wall control joints.
 - 5. Wall and floor joints in tile work.
 - 6. Joints between plumbing fixtures and walls.
 - 7. Miscellaneous caulking and sealing not specified as work of other sections.

1.02 RELATED SECTIONS

- A. Section 03300 – Cast-In-Place Concrete: Concrete construction, expansion and contraction joints.
- B. Section 04300 – Unit Masonry Systems: Exterior wall joints.
- C. Section 07270 – Firestopping: Firestopping materials and accessories.
- D. Section 07620 – Sheet Metal Flashing and Trim: Sealants used in conjunction with metal flashings for roofing.
- E. Section 09300 – Tile: Expansion, contraction and control joints.
- F. Division 15 – Mechanical: Installation of silicone sanitary sealant between plumbing fixtures and walls.

1.03 REFERENCES

- A. ASTM C790 – Recommended Practices for Use of Latex Sealing Compounds.
- B. ASTM C804 – Recommended Practice for Use of Solvent-Release Type Sealants.
- C. ASTM C834 – Latex Sealing Compounds.
- D. ASTM C920 – Elastomeric Sealants.
- E. ASTM C1193 – Standard Guide for Use of Joint Sealants.

1.04 SUBMITTALS

- A. Material and Equipment Submittals: Submit the following under provisions of Section 01001:
 - 1. Product Data: Submit sealant manufacturer's technical data. Include manufacturer's recommendations for joint size; joint preparation; back-up material; sealant storage, mixing and application instructions; and specific instructions for use of primer on this project.
 - 2. Samples: Submit samples of sealant colors for color selection of SLNT-1, SLNT-2, SLNT-3, SLNT-5.

- B. Closeout Submittals: Submit the following under provisions of Section 01001.
 - 1. Warranty.

1.05 ENVIRONMENTAL CONDITIONS

- A. Do not apply joint sealing materials at temperatures above or below manufacturer's recommendations, during rain or snow, or to damp or frosted surfaces.

1.06 WARRANTY

- A. Provide 2-year warranty under provisions of Section 01700, for sealants SLNT-1 and SLNT-2.
- B. Warranty: Warranty to include labor and material required to replace sealants that fail because of loss of cohesion or adhesion, or do not cure.

PART 2: PRODUCTS

2.01 SEALANT MATERIALS

- A. SLNT-1: Two-component, non-sag, polyurethane sealant with movement capability of ± 50 percent and conforming to ASTM C920, Type M, Grade NS, Class 25; non-staining. Color: As selected by Architect; provide custom colors as required.
 - 1. Mameco International, "Vulkem 227".
 - 2. Pecora Corporation, "Dynatrol 11".
 - 3. Sonneborn Building Products, "Sonolastic NP2".
 - 4. Tremco, "Dymeric".
- B. SLNT-2: Self-leveling, two component, non-staining, non-bleeding polyurethane sealant with movement capability of ± 25 percent and conforming to ASTM C920, Type M, Grade P, Class 25. Color: As selected by the Architect.
 - 1. Pecora Corporation, "Urexpan NR-200".
 - 2. Sonneborn Building Products, "Sonolastic SL2".
 - 3. Tremco, "THC-900".
- C. SLNT-3: One-part, non-sag, skinning, paintable acrylic latex sealant capable of ± 7.5 percent minimum movement and conforming to ASTM C834. Color: As selected by Architect.
 - 1. Pecora Corporation, "AC-20 Siliconized".
 - 2. Sonneborn Building Products, "Sonolac".
 - 3. Tremco, "Acrylic Latex 834".
- D. SLNT-4: Silicone Sanitary Sealant; ASTM C920, Type S, Grade NS; mildew resistant. Color: White.
 - 1. Dow Corning Corporation, "786 Mildew Resistant Silicone Sealant".
 - 2. General Electric Company, "GE Silicone Sanitary 1700 Sealant".
 - 3. Sonneborn Building Products, "Omniplus".
- E. SLNT-5: Silicone building and Glazing Sealant (non structural); ASTM C920, Type S, NS, Class 25, single component, chemical curing. Color: As selected by Architect.
 - 1. Dow Corning Corp., "Dow Corning 999-A".
 - 2. General Electric Co., "Silglaze II".
 - 3. Pecora Corporation; "863".
- F. SLNT-6: Acoustical Sealant; Non-hardening, non-skinning acoustical sealant for concealed joints.
 - 1. Tremco, "Acoustical Sealant".

2. United States Gypsum, "Acoustical Sealant".
- G. SLNT-7: Expandable Form Sealer.
1. EM-Seal Corporation, "Gray-Flex".
 2. Illbruck Corporation, "Will-Seal Tape Type 150".
- H. SLNT-8: Foam Sealer:
1. Preformed closed cell polyvinyl chloride or butyl rubber based foam tape, minimum 30% compression. Resistant to weathering, U.V., mildew, fungi and oxidation. Pressure sensitive adhesive on the non-liner side of tape roll. Provide tape width and thickness recommended by manufacturer for joint conditions.
 - a. Norton Performance Plastics, Granville, NY, Tel. 1-800-724-0883. "Norseal V-740".
 - b. Fuller, "Architectural Sealant Tape No. 606".
- I. SLNT-9: Setting Bed;
1. One-part butyl rubber, aluminum/stone color:
 - a. Pecora "BC-158".
 - b. Tremco "Butyl Sealant".
- J. SLNT-10: Ultra-Low Modulus Silicone Sealant. (EIFS)
1. Ultra Low-Modulus Silicone Rubber Sealant: Silicone rubber based, 1 part neutral cure elastomeric sealant with plus 100 percent to minus 50 percent movement.
 2. Color: To match EIFS topcoat color. If painted topcoat color, match color specified under Section 07183.
 - a. Acceptable manufacturers and product:
 - 1) Dow Corning Corporation: 790 Building Sealant
 - 2) Tremco Construction Division: Spectrum 1.
- 2.02 PRIMER
- A. Non-staining type, as recommended by sealant manufacturer to suit application.
- 2.03 JOINT BACKING
- A. Backer Rod: Provide pre-formed, compressible, non-staining, closed cell polyethylene or open cell expanded polyurethane foam rod compatible with the sealant used and acceptable by the sealant manufacturer for the specified application, except as follows:
1. Provide closed cell backer rod with self-leveling sealant (SLNT-2) horizontal applications.
- B. Provide round rod, size as recommended by manufacturer based on width and depth of joint and condition located.
1. Joints up to 1/2" wide, rod shall equal width of joint plus 1/8".
 2. Joints 1/2" wide and larger, rod shall be equal to the joint width plus 1/4".
 3. Provide bond breaker tape where joint depth does not allow space for backer rod as recommended by sealant manufacturer to suit application.
- C. Do not use joint backing impregnated with oil, tar or asphalt.
- 2.04 ACCESSORIES
- A. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- B. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.
- 2.05 WORKING TIME

- A. Use two-component sealants within maximum period of time after mixing recommended by sealant manufacturer for specific material and job conditions, and discard sealant not used within this time.

PART 3: EXECUTION

3.01 INSPECTION

- A. Verify joint dimensions, physical and environmental conditions are acceptable to receive work of this Section.
- B. Beginning of installation means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean, prepare and design joints in accordance with manufacturer's instructions. Remove any loose materials and other foreign matter that might impair adhesion of sealant.
- B. Verify that joint shaping materials and release tapes are compatible with sealant.
- C. Examine joint dimensions and size materials to achieve required width/depth ratios.
- D. Use joint filler to achieve required joint depths, to allow sealants to perform properly.
- E. Use bond breaker where required.

3.03 INSTALLATION

- A. Perform installation in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Install joint backing according to manufacturer's instructions in joints to receive sealant and as indicated on Drawings. Use proper size and shape pieces so installed joint backing is compressed approximately 30% and face of foam is at required depth. Do not twist or braid rod stock. Do not puncture skin of rod stock. Carefully roll rod stock into joint without stretching.
- C. Joints to receive SLNT-1 shall be not less than ¼" and not exceed 2" in width. Depth of sealant shall be as follows:

<u>Joint Width</u>	<u>Min. Depth</u>	<u>Max. Depth</u>
¼" to ½"	¼"	Equal to Width
½" to 2"	½"	5/8"
- D. Perform installation in accordance with ASTM C1193.
- E. Apply sealant within recommended temperature ranges. Consult manufacturer when sealant cannot be applied within recommended temperature ranges.
- F. Tool joints to form smooth, uniform beads, with slightly concave surfaces. Do not use tooling agents, unless specifically recommended by sealant manufacturer.
- G. Form joints free of air pockets, foreign embedded matter, ridges and sags.

3.04 CLEANING

- A. Clean excess sealant, primer or bond breaker with cleaning solutions as recommended by primary sealant manufacturer. Do not use acidic cleaning materials.

3.05 SEALANT SCHEDULE

<u>Type</u>	<u>Location</u>
SLNT-1	Concrete construction, expansion and contraction joints. Exterior wall joints and control joints. Perimeter of storefront, door frames and louvers. Miscellaneous exterior caulking and sealing.
SLNT-2	Joints in floor tilework. Exterior sidewalks adjacent to building. Interior exposed joints in slabs where subject to foot or vehicular traffic. Interior exposed perimeter joints in slabs abutting walls and other vertical surfaces.
SLNT-3	Miscellaneous interior and exterior joints subject to moderate movement and joints to be painted.
SLNT-4	Joints between plumbing fixtures and walls. Joints surrounding plastic laminate vanities and counter tops, fixtures and equipment requiring sanitary sealant.
SLNT-5	Where indicated on Drawings, and for interior and exterior sealing of metal to metal. Refer to Section 08800 for installation requirements in glazing.
SLNT-6	Joints at sound-proofed partitions. Refer to Section 09250 for installation requirements in gypsum board partitions.
SLNT-7	Backer for exterior wide joints subject to dynamic movements.
SLNT-8	Backer for rough substrates on exterior walls
SLNT-9	Use for setting beds at exterior thresholds and sill plates.
SLNT-10	Use for EIFS joints. Refer to Section 07241 for installation requirements. Coordinate installation of sealant with EIFS manufacturer. (If applicable)

END OF SECTION - 07900

