

**SECTION 07 92 00
JOINT SEALANTS**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work in this section.

1.2 DESCRIPTION OF WORK

- A. This Contractor shall furnish and install all joint sealers as shown on the drawings or herein specified, or both.

1.3 JOB CONDITIONS

- A. This Contractor shall inspect the job conditions as he finds them, and his starting of the work constitutes approval of all conditions.

1.4 QUALITY ASSURANCE

- A. All manufacturer items must be factory labeled, on the material or its container.
- B. Manufacturer shall have a minimum of 10 years of experience specializing in specified item.
- C. Applicator shall be Sealant Manufacturer approved with 5-years of successful experience.

1.5 REFERENCES

- A. ACI 504 R – Guide to Joint Sealants for Concrete Structures
- B. ASTM C834 – Standard Specification for Latex Sealants
- C. ASTM C919 – Standard Practice for Use of Sealants in Acoustical Applications
- D. ASTM C920 – Standard Specification for Elastomeric Joint Sealants
- E. ASTM C1193 – Standard Guide for Use of Joint Sealants
- F. ASTM D1056 – Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber

1.6 SUBMITTALS

- A. Submit manufacturer's detailed technical data for materials, fabrication, and installation, including catalog cuts of bond breakers, backer rods, and accessories.
 - 1. Submit full color samples for Architect selection.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.
- B. Store and handle materials in compliance with manufacturer's requirements to prevent their deterioration or damage due to moisture, temperature, contaminants, or other causes.

1.8 WARRANTY

- A. The Contractor shall furnish written warranty that work executed under this section is free from defects of material and workmanship for a period of 1-year from date of substantial completion of the entire project.
 - 1. Include coverage that the Contractor will immediately and at its own expense, repair and replace all such defects as may develop during the term of this warrantee.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with the requirements, provide products by one on the following:

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1. DAP Products Inc., Dayton, Ohio
2. Dow Corning Corp., Midland, Michigan
3. Emseal Joint System, Ltd., Westborough, Massachusetts
4. General Electric Co., GE Silicones, Waterford, New York
5. Pecora Corp., Harleysville, Pennsylvania
6. Sonneborn Products Division of BASF
7. Tremco
8. Hilti Construction Chemicals

- B. Contractor may request other products or manufacturers for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product.

2.2 MATERIALS

A. General

1. The term "Acceptable Standard" when used within this Section, refers to the manufacturer and product listed, specified as to type and quality required for this project.
2. Contractor shall supply a single resource responsibility for joint sealer materials.
3. Compatibility: Provide joint sealers, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and final experience.

B. Caulking Compounds (Acrylic Latex Sealant)

1. Latex rubber modified, acrylic emulsion polymer sealant compound; manufacturer's standard, one part, non-sag, mildew resistant, acrylic emulsion sealant complying with ASTM C 834, formulated for accepting paint. (Product recommended for exposed interior locations involving joint movement of less than 5%).
2. Acceptable Standard
 - a. "Sonolac"; Sonneborn Products, Inc
 - b. "Acrylic Latex Caulk834"; Tremco, Inc
 - c. "Acrylic Latex Caulk with Silicone"; DAP
 - d. "AC-20"; Pecora Corp

C. One-Part Elastomeric Sealant (Silicone)

1. One component elastomeric sealant complying with ASTM C 920, Class 25, Type NS (non-sag), unless manufacturer recommends Type S (self-leveling) for the application shown.(general caulking , glazing applications).
 - a. Acceptable Standard
 - i) "Pecora 864NST Architectural Silicone Sealant; Pecora Corp.
 - ii) "Dow Corning 791; Dow Corning Corp
 - iii) "SCS2700 Silpruf": General Electric
 - iv) "Spectrem 2"; Tremco, Inc
2. One component mildew resistant silicone sealant used around countertops, backsplashes, and other wet interior locations.
 - a. Acceptable Standard
 - i) "Dow Corning 786", Dow Corning Corp
 - ii) "Sanitary 1700"; General Electric
3. One-component high movement joints (+100/-50) use sealants in locations indicating high movement.
 - a. "Dow Corning 790"; Dow Corning Corp

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- b. "Spectrem 1"; Tremco, Inc
- D. Elastomeric Sealants (Polyurethane) – Precast concrete & Tilt-Up Concrete Panels
 - 1. One component polyurethane sealant, complying with ASTM C 920, Type S, Grade NS (non-sag), Class 25 (expansion and control joints, precast concrete panel joints, tilt-up concrete panel joints, perimeter caulking, flashing and sheet metal conditions).
 - a. Acceptable Standard
 - i) "Sonolastic NP 2"; Sonneborn Products, Inc
 - ii) "Dymonic"; Tremco, Inc
 - iii) "Dynatrol I"; Pecora Corp
 - iv) "CS 2130"; Hilti
 - 2. Multi- component polyurethane sealant, complying with ASTM C920, Type M, Grade N(non-sag)Class 25 (same uses as in previous item)
 - a. Acceptable Standard
 - i) "Sonolastic NP 2" Sonneborn Products, Inc
 - ii) "Dymeric"; Tremco, Inc
 - iii) "Dynatrol II"; Pecora Corp
 - iv) "Vulkem 922"; Tremco
 - 3. Multi-component epoxidized polyurethane sealant complying with ASTM C 920, Type M, Grade NS, Class A (same uses as described in item 1, also used on fire resistance rated joint design details.)
 - a. Acceptable Standard
 - i) "Dymeric"; Tremco, Inc
 - ii) "DynaTrol II"; Pecora Corp
- E. One-part self-leveling polyurethane sealant (for traffic areas)
 - 1. One component polyurethane self-leveling sealant, complying with ASTM C 920, Type S, Grade P, Class 25.
 - a. Acceptable Standard
 - i) "Sonolastic SL 1"; Sonneborn Products, Inc
 - ii) "NR-201 Urexpan"; Pecora Corp
 - iii) "Vulkem 45"; Tremco
 - 2. Two component polyurethane self-leveling sealant, complying with ASTM C920, Type M, Grade P, Class 25.
 - a. Acceptable Standard
 - i) "Sonolaastic SL 2"; Sonneborn Products, Inc
 - ii) "NR-200 Urexpan": Pecora Corp
 - iii) "Vulkem 245"; Tremco
 - iv) "THC900/THC901": Tremco, Inc
- F. Flexible Polyurethane Security Sealant (for use on interior joints, perimeter of fixtures, penetrations, vents, doors, windows and similar openings)
 - 1. Two component polyurethane sealant, complying with ASTM C 920, Grade NS, Class 12.5, with a Shore A Hardness of 55, Type M.
 - a. Acceptable Standard
 - i) "Dynaflex", Pecora Corp
- G. Miscellaneous Materials
 - 1. Provide joint cleaner and joint primer sealer as recommended by the sealant or caulking compound manufacturer.

2. Sealant backer rod shall be compressible rod stock, polyethylene foam; polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam, or other materials as recommended by sealant manufacturer.
 - a. Where plans indicate a 2" building expansion joint, provide an expanding foam secondary sealant, "BackerSeal" as manufactured by Emseal Joint Systems, Ltd., or Apolytite Standard as manufactured by Polytite Manufacturing Corporation, behind sealant in lieu of standard backer rod.
3. Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealer substrate tests and field tests.
4. Cleaners for Nonporous Surfaces: Provide non-staining, chemical cleaners of type acceptable to manufacturer of sealant and sealant backing materials, which are not harmful to substrates and adjacent nonporous materials, and which do not leave oily residues or otherwise have a detrimental effect on sealant adhesion or in service performance.
5. Masking Tape: Provide non-staining, non-absorbent type compatible with joint sealants and to surfaces adjacent to joints.

PART 3 EXECUTION

3.1 INSPECTION

- A. This Contractor shall notify the General Contractor, when he has completed his work and is ready for A/E inspection.

3.2 INSTALLATION

- A. Install all products in strict accordance to all manufacturers' recommendations.
- B. Install joint backing to achieve a neck dimension no greater than 1/3 the joint width.
- C. Install bond breaker where joint backing is not used.
- D. Tool joints concave.
- E. Tilt-up concrete wall panel joints; clean joints so clean concrete is exposed for sealant bonding.
 1. Exterior wall joints
 - a. Seal both sides (outside and inside) with an exterior joint system consisting of a foam-backer rod (set into the joint for the entire length of the joint cavity) and cover with a urethane or other acceptable joint sealant material (sealant depth should be one-half the joint width, max. 1/2" depth) tool joint material in place.
 - b. Protect sealant material during painting of walls.
 2. Interior wall joints
 - a. In fire resistance rated walls
 - i) Seal both sides of joint with a fire-stopping sealant, encapsulating the ceramic blanket protection material, finish joint similar to that of the exterior wall joint described above.
 - b. In non-fire resistance rated walls
 - i) Seal exposed concrete panel joints
 - ii) Concealed (furred) concrete panel joints need not be sealed

3.3 ADJUSTMENT AND CLEANING

- A. After installation, thoroughly clean all exposed surfaces and restore all damaged material to its original condition, or replaced with new material.

END OF SECTION