

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.01 SUMMARY:

- A. Work Included: Provide products in accordance with the Contract Documents. The Contract Documents are as defined in the "Agreement". The "General Conditions Governing All Contracts" shall apply to all work under the Contract. The Work of this Section shall include but not be limited to the following:

- 1. Joint sealant assemblies in horizontal and vertical surfaces.

- B. Related Sections

- 1. Section 08100 - Steel Doors and Frames.

1.02 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced firm that has recently completed Joint Sealer projects similar in cost, material, design and extent to that indicated by this section and whose work has resulted in construction with a record of successful in-service performance.

- B. Source for Materials: Obtain joint sealer materials from a single manufacturer for each different product.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each product required, including instructions for preparation and application.

- 1. Certification by firestopping manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs) and are nontoxic to building occupants.

- B. Samples: Submit manufacturer's standard bead samples consisting of strips of actual products showing full range of colors available.

- C. Submit product specifications and material data (MSD) safety sheets for each product.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original unopened containers with labels indicating manufacturer, expiration date, and other pertinent data.

- B. Store and handle materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.05 PROJECT CONDITIONS

- A. Environmental Conditions: Do not install joint sealers when air and surface temperatures are outside the limits permitted by joint sealer manufacturer, or when joint substrates are wet or dirty.
- B. Joint Widths: Do not proceed with installation of joint sealers when joint widths are not as allowed by joint sealer manufacturer.

1.06 EXTENDED WARRANTY

- A. Submit a warranty to repair or replace defective joint sealer materials or workmanship; including staining, loss of adhesion, loss of cohesion, cracking or discoloration, for a period of 5 years from the date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, provide products as manufactured by one of the following, or approved equal:
 - 1. Dow Corning
 - 2. General Electric Co.
 - 3. Pecora Corp.
 - 4. Tremco, Inc.
 - 5. Or Approved Equal.

2.02 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealers, joint fillers and related materials that are compatible with one another and with joint substrates, as demonstrated by testing and field experience.
- B. Colors: Provide colors of joint sealers as selected by the Architect from manufacturer's standard colors.

2.03 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standard: Comply with ASTM C 920.
- B. One-Part Mildew-Resistant Silicone Sealant: Type S; Grade NS; Class 25; Uses: Non-traffic, formulated with fungicide for sealing interior joints with nonporous substrates at vertical surfaces of ceramic tile in toilets, kitchens and between plumbing fixtures and tile.
 - 1. Products: Subject to compliance with requirements, provide one of the following mildew-resistant sealants.
 - a. "Dow Corning 786"; Dow Corning Corp.
 - b. "SCS 1702"; General Electric Co.
 - c. "863 #345 White"; Pecora Corp.
 - d. "Proglaze White"; Tremco, Inc.
 - e. Or Approved Equal.

2.04 LATEX JOINT SEALANTS

- A. Acrylic-Emulsion Sealant: One part, nonsag sealant complying with ASTM C 834, paintable and recommended for interior applications with joint movement of not more than plus or minus 5 percent. Subject to compliance with requirements, provide one of the following:

1. "Chem-Calk 600"; Bostik Construction Products Div.
2. "AC-20"; Pecora Corp.
3. "Tremco Acrylic Latex 834"; Tremco Inc.
4. Or Approved Equal.

2.05 NON-ELASTOMERIC SEALANT

- A. Acrylic-Emulsion Sealant: Provide acrylic-emulsion or latex-rubber-modified acrylic-emulsion sealant compound complying with ASTM C 834, permanently flexible, nonstaining and nonbleeding; recommended by manufacturer for protected exterior exposure and general interior exposure. Provide one of the following, or approved equal:

1. Acrylic Latex Caulk, Tremco Inc.
2. AC-20 Acrylic Latex, Pecora
3. Igas Calking-L, Sika Chemical Corp.
4. Approved equal

- B. Additional performance requirements for sealants supplied under paragraph A above are as follows:

1. Adhesive strength to aluminum: 12 psi min.
2. % total solids: minimum of 95% after 7 days at 75 degrees F.
3. Pot life: 6 hours at 75 degrees F. minimum.

2.06 JOINT SEALANT BACKING

- A. General: Provide backings which are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer.

- B. Plastic Foam Joint-Fillers: Preformed, compressible, resilient, non-waxing, non-extruding strips of plastic foam of material indicated below, and of size, shape and density to control sealant depth.

1. Either flexible, open cell polyurethane foam or non-gassing, closed-cell polyethylene foam, unless otherwise indicated.

- C. Tubing Joint-Fillers: Neoprene, EPDM or silicone tubing complying with ASTM D 1056, non-absorbent to water and gas, resilient at temperatures down to -26 deg F., of size and shape to provide a secondary seal.

- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape to prevent bond between sealant and materials at back of joint. Provide self-adhesive tape where applicable.

2.07 MISCELLANEOUS MATERIALS

- A. Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates, as determined from preconstruction joint sealer-substrate and field tests.
- B. Cleaners: Provide non-staining cleaner of type acceptable to manufacturer of sealant and sealant backing materials.
- C. Masking Tape: Provide non-staining, non-absorbent type compatible with joint sealants and to surfaces adjacent to joints.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Inspect joints to receive joint sealers for compliance with requirements. Report conditions detrimental to joint sealer work. Proceed after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
 - 1. Remove all foreign material from joint substrates which could interfere with adhesion of joint sealer, including water.
 - 2. Clean porous joint substrate surfaces to produce a clean, sound substrate. Remove loose particles remaining from cleaning.
 - 3. Remove laitance and form release agents from concrete.
 - 4. Clean non-porous surfaces with cleaners which are not harmful to substrates or leave residues that may affect joint sealers.
- B. Joint Priming: Prime joint substrates to comply with joint sealer manufacturer's recommendations. Confine primers to areas of joint sealer bond; not on adjoining surfaces.
- C. Masking Tape: Mask adjoining surfaces which might be permanently stained or damaged by sealant or by cleaning required to remove sealant. Remove tape immediately after tooling without disturbing joint.

3.03 INSTALLATION OF JOINT SEALERS

- A. General: Comply with joint sealer manufacturers' printed installation instructions, except where more stringent requirements apply.
- B. Elastomeric Sealant Installation Standard: Comply with ASTM C 962 for use of joint sealants as applicable to conditions indicated.
- C. Installation of Sealant Backings: Install sealant backings to produce the shapes and depths of sealants for optimum performance.

1. Do not leave gaps between ends of joint-fillers.
 2. Do not stretch, twist, puncture or tear joint-fillers.
 3. Do not use absorbent joint-fillers which are wet.
 4. Install bond breaker tape where required to prevent third-side adhesion of sealant to back of joint.
 5. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint fillers.
- D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting joint substrates, completely filling joints and providing uniform, cross-sectional shapes and depths for optimum sealant movement. Mask adjacent surfaces if necessary.
- E. Tooling of Nonsag Sealants: Tool sealants to form smooth, uniform beads to eliminate air pockets and to ensure adhesion of sealant with sides of joint. Remove excess sealants from adjacent surfaces. Provide concave joint configuration per Figure 6A in ASTM C 962.
- F. Installation of Preformed Foam Sealants: Comply with manufacturer's directions, to produce seal continuity at ends, turns, and joints.
- G. Installation of Fire-Stopping Sealant: Install sealant and accessory materials to fill openings penetrating floors and walls to provide fire-stops with required fire resistance ratings.
- 3.04 CLEANING
- A. Clean off excess sealants or sealant smears as work progresses by methods and materials approved by manufacturers of joint sealers. Remove masking tape when no longer required.
- 3.05 PROTECTION
- A. Protect joint sealers from contamination or damage, so that they are without deterioration or damage at time of Substantial Completion.
- B. Remove damaged or defective joint sealers and reseal joints to match original work.

END OF SECTION