

## SECTION 07920 - JOINT SEALANTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes sealants for the following:
  - 1. Interior joints in vertical surfaces and horizontal nontraffic surfaces.

#### 1.2 SUBMITTALS

- A. Product data from manufacturers for each joint sealant product required.
  - 1. Certification by joint sealant manufacturer that sealants plus the primers and cleaners required for sealant installation comply with local regulations controlling use of volatile organic compounds.
  - 2. Manufacturer's inspection and maintenance procedures.
- B. Samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view.
- C. Certificates from manufacturers of joint sealants attesting that their products comply with specification requirements and are suitable for the use indicated.
- D. Compatibility and adhesion test reports from elastomeric sealant manufacturer indicating that materials forming joint substrates and joint sealant backings have been tested for compatibility and adhesion with joint sealants within a 36 month period preceding date of Contractor's submittal of test results to Architect. Include sealant manufacturer's interpretation of test results relative to sealant performance and recommendations for primers and substrate preparation needed to obtain adhesion.
- E. Product test reports for each type of joint sealants indicated, evidencing compliance with requirements specified.

#### 1.3 QUALITY ASSURANCE

- A. Sealant Compatibility and Adhesion Testing: Use sealant manufacturer's standard test methods to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
- B. Comply with all sealant requirements of local health department. All products used in food handling areas shall be approved by the National Sanitation Foundation under Standard 51.

## 1.4 WARRANTY

- A. Special Installer's Warranty: Written warranty in which Installer agrees to repair or replace elastomeric joint sealants that do not meet requirements specified in this Section or fail in adhesion within specified warranty period two (2) years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with requirements specified in this Section within twenty (20) years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, 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 field experience.
- B. Elastomeric Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically cured sealant of base polymer specified.
- C. Colors of Exposed Joint Sealants: As selected.

### 2.2 PRODUCTS

- A. Sealant Type 1:

Not Used

- B. Sealant Type 2:

- 1. Description:

- a. Compound: One-part polyurethane sealant, self-leveling.
- b. Manufacturers:
  - 1) "Vulkem 45" by Mameco International.
  - 2) "Sonomeric CT" by Sonneborn-Contech.
  - 3) "Sikaflex 12SL" by Sika Corp.
- c. Color: To be selected by Architect.

2. Interior Uses: In movement joints of floors and joints between floor surfaces and built-in items, between walls and floors, and between column isolation joints and floors, except where specified under other sections.

C. Sealant Type 3:

1. Description:
  - a. Compound: Acrylic-latex, one-part compound, ASTM C 834; gun grade, non-staining, non-bleeding, non-cracking; to remain flexible with surface quick drying to permit painting with oil-base or latex paints; designed for use in interior narrow joints.
  - b. Manufacturers:
    - 1) "Eternaflex Acrylic Latex Sealant" by Gibson-Homans Co.
    - 2) "Sonolac" by Sonneborn-Contech.
    - 3) "Acrylic Latex Caulk AC-20" by Pecora Corporation.
    - 4) "Tremco Acrylic Latex Caulk" by Tremco.
2. Interior Uses: In non-moving, interior joints, except locations specifically shown or specified to receive other type sealant, as follows:
  - a. To fill exposed cracks and voids where metal door frames, louvers and other metal fabrications are built into painted interior partitions.
  - b. At built-in millwork, attached and built-in equipment and accessories installed under this contract to complete neat fit at walls.
  - c. Between wallboard and metal fabrications to fill cracks and joints for painting.
  - d. Around mechanical and electrical equipment, grilles and registers built into painted masonry or other finished partitions, at ducts, pipes and conduit through walls where necessary to fill cracks and voids for finishing.
  - e. Interior EIFS cornice moldings.
  - f. Other interior non-masonry wall and ceiling non-moving joint locations, specifically noted to receive "caulking" or "sealant", except where elastomeric sealant is specifically identified.

D. Sealant Type 4:

Not Used

E. Sealant Type 5:

1. Description:
  - a. Compound: One part, mildew-resistant silicone.
  - b. Manufacturers:
    - 1) Dow Corning 786.
    - 2) GE Sanitary 1700.

- c. Color: Clear or White, as approved by Architect.
- 2. Interior Use:
  - a. All wet areas.
  - b. Around all freezer and cooler boxes, refrigerated display cases.

F. Sealant Type 6:

Not Used

### 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: ASTM C 1330, of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
  - 1. Type C: Closed-cell material with a surface skin.
  - 2. Type O: Open-cell material.
  - 3. Type B: Bicellular material with a surface skin.
  - 4. Type: Any material indicated above.
- C. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to **minus 26 deg F (minus 32 deg C)**. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and otherwise contribute to optimum sealant performance.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

### 2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. 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.

- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants.
  - 1. Remove foreign material from joint substrates that could interfere with adhesion of joint sealant.
  - 2. Clean 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 nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues could interfere with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where recommended in writing by joint sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. 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.
- D. Sealant Installation: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- E. Install sealant backings to support sealants during application and at position required to produce optimum sealant movement capability.
  - 1. Do not leave gaps between ends of sealant backings.
  - 2. Do not stretch, twist, puncture, or tear sealant backings.
  - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

- F. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and back of joints.
- G. Place sealants so they directly contact and fully wet joint substrates.
  - 1. Completely fill recesses provided for each joint configuration.
  - 2. Produce uniform, cross-sectional shapes and depths that allow optimum sealant movement capability.
- H. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants to form smooth, uniform beads, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealants from surfaces adjacent to joint.
  - 2. Use tooling agents that are approved by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  - 3. Joint Configuration: Concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
- I. 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.

END OF SECTION