

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Preparing sealant substrate surfaces.
- B. Sealant and backing.

1.2 REFERENCES

- A. ASTM C920: Specification for elastomeric joint sealants.
- B. ASTM C834: Specification for latex sealing compounds.
- C. ASTM D 1622: Test method for apparent density of rigid cellular plastics.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each joint sealer product required, including instructions for joint preparation and joint sealer application.
- B. Samples for Initial Selection Purposes: Submit manufacturer's standard bead samples consisting of strips of actual products showing full range of colors available for each product exposed to view.
- C. Submit Manufacturer's Material Safety Data Sheet information and other instructions for the proper use of specified products to avoid adverse health and environmental effects.

1.4 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section must have a minimum of three years' experience manufacturing the product.
- B. Warranty: The Contractor shall provide a two (2) year watertight warranty from the date of Substantial Completion for the work of this section.

1.5 DELIVERY STORAGE AND HANDLING

- A. Deliver materials to project site in original unopened containers or bundles with labels informing about 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 to prevent their deterioration or damage due to moisture, temperature change, contaminates or other causes.

1.6 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealers when ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturers.

B. Provide notification to Owner ten (10) days prior to use of any sealants or other materials likely to cause odors or fumes.

C. Joint Width Conditions: Do not proceed with installation of joint sealers when joint widths are less than allowed by joint sealer manufacturer for application indicated.

PART 2 – PRODUCTS

2.1 GENERAL

A. General Sealant Performance Requirements:

1. Provide colors indicated or, if not otherwise indicated, as selected by Owner from manufacturer's standard colors.
2. Selected materials for compatibility with joint surfaces and other indicated exposures, and except as otherwise indicated select modulus of elasticity and hardness or grade recommended by manufacturer for each application indicated.
3. Where exposed to foot traffic, select materials of sufficient strength and hardness to withstand traffic without damage or deterioration of sealant.

2.2 ELASTOMERIC SEALANTS

A. One-Component Polyurethane Sealant (1PU-S):

1. Polyurethane based, one-part elastomeric sealant, complying with ASTM-C-920-79, Type S Grade NS (non-sag), Class 25, unless Grade P recommended by manufacturer for application shown.
 - a. "Sonolastic NP-1" by Sonneborn,
 - b. "Bostic 1000" by Bostic,
 - c. "Dymonic" by Tremco
 - d. Or Approved Equal.

B. One-Component Interior Silicone Rubber Sealant: (NpbMr-SR-S):

1. Silicone rubber-based, one-part elastomeric sealant, complying with ASTM-C-920-79, Type S, Grade NS, Class 25 and FS-S-001543, Class A. Provide Acid, nonporous-bond type, mildew-resistant silicone rubber sealant (NpbMr-SR-S) where both joint faces are metal, glass, plastic, tile or other non-porous material.
 - a. "Omni-Plus" by Sonneborn,
 - b. "Dow 8640" by Dow Corning,
 - c. "G.E. 1702" by G.E.
 - d. Or Approved Equal.

C. One-Component Acrylic-Emulsion Caulk (AcEm-C):

1. Acrylic-latex-rubber-modified base, one-part caulk, permanently flexible, nonstaining and nonbleeding and paintable; recommended by manufacturer for general interior exposure, complying with ASTM-C-834-76.
 - a. "Sonolac" by Sonneborn,

- b. "Sikaflex 420" by Sika,
- c. "Tremco Acrylic Latex" by Tremco
- d. Or Approved Equal.

D. One-Component Butyl Caulk (Bu-C):

- 1. Butyl base, one-part caulk, solvent release, non-skinning, black color; recommended by manufacturer for concealed, interior building joints not exposed to touch.
 - a. "BC 158" by Pecora,
 - b. "Tremco Butyl Caulk" by Tremco,
 - c. "Chem Calk 300" by Bostik
 - d. Or Approved Equal.

E. One-Component Polyurethane Security Sealant (ST-PU):

- 1. Silyl-terminated polyurethane based, one-part tamper-resistant elastomeric sealant, complying with ASTM-C-920-98, Type S Grade NS (non-sag), Class 12.5.
 - a. "DynaFlex SC" by Pecora Corporation
 - b. "Sonoclastic Ultra" by Sonneborne Corporation
 - c. Or Approved Equal.

2.3 MISCELLANEOUS MATERIALS

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), Type O (open-cell material) Type B (bi-cellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Manufacturers:
 - 1. Construction Foam Products; a division of Nomaco, Inc
 - 2. Sonneborn
 - 3. BASF Corporation – Construction Systems
 - 4. Or Approved Equal.
- D. Joint Primer/Sealer: Provide type of joint primer/sealer recommended by sealant manufacturer for joint surfaces to be primed or sealed.
- E. Bond Breaker Tape (BB-Tp): Polyethylene tape or other plastic tape as recommended by sealant manufacturer to be applied to sealant-contact surfaces where bond to substrate or joint filler must be avoided for proper performance of sealant. Provide self-adhesive tape where applicable.
- F. Bituminous Cane Fiber Joint Fillers (BF-JF):

1. Provide resilient and non-extruding type premolded bituminous impregnated cane fiberboard units complying with ASTM D-1751, FS HH-F-341F, Type I and AASHTO 213.
 - a. "All Cane Joint" by Edoco,
 - b. "Horn Fiber Expansion Joint" by A.C. Horn
 - c. "Fibre Expansion Joint" by WR Meadows
 - d. Or Approved equal.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces and joint openings are ready to receive work and field measurements are as shown on drawings and recommended by the manufacturer.
- B. Beginning of installation means Contractor accepts existing substrate.

3.2 PREPARATION

- A. Clean joints in accordance with manufacturer's instructions.
- B. Remove loose materials and foreign matter that might impair adhesion of sealant.
- C. Verify that joint backing and release tapes are compatible with sealant.
- D. Perform preparation in accordance with ASTM C804 for solvent release C790 for latex base sealants.
- E. Protect elements surrounding the work of this section from damage or disfiguration.

3.3 INSTALLATION

- A. Install sealant in accordance with manufacturer's instructions.
- B. Measure joint dimensions and size materials to achieve required width/depth ratios.
- C. Install joint backing to achieve a neck dimension no greater than 1/3 the joint width.
- D. Install bond breaker where joint backing is not used.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Install sealant free of air pockets, foreign embedded matter, ridges and sags.
- G. Tool joints concave.

3.4 CLEANING AND REPAIRING

- A. Clean work.
- B. Clean adjacent soiled surfaces.

- C. Repair or replace defaced or disfigured finishes caused by work of this section.

3.5 PROTECTION OF FINISHED WORK

- A. Protect finished installation.
B. Protect sealants until cured.

3.6 SEALANT SCHEDULE

A.	Location	Required Sealant (2.02A-E)
1.	Hollow Metal Work:	(1PU-S)
2.	CMU:	(1PU-S)
3.	GWB:	(AcEm-C)
4.	Mechanical Penetrations:	(1PU-S)
5.	Wood to Metal:	(1PU-S)
6.	Wood to Wood:	(1PU-S)
7.	Plastic to Plastic:	(NpbMr-SR-S)
8.	GWB to Plastic or Plastic to Plastic in infection control areas exposed to view:	(ST-PU)

END OF SECTION