SECTION 079100 - PREFORMED JOINT SEALS

Revise this Section by deleting and inserting text to meet Project-specific requirements.

MasterSpec includes provisions for LEED 2009, LEED v4, LEED v4.1, IgCC/ASHRAE 189.1, and Green Globes. Sustainable design requirements may be inserted in the Section Text using the hypertext links.

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes:

Preformed, foam joint seals.

Extruded-silicone joint seals.

Refer to sections listed below for cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections. Sections listed below are for spec editor’s and design team coordination and are to remain as Editor’s Notes. Remove referenced specification sections within the body of the specification if not applicable to the project.

Section 079200 "Joint Sealants" for liquid sealants applied over preformed seals in dual-seal systems.

* + - 1. PREINSTALLATION MEETINGS

Retain "Preinstallation Conference" paragraph below if Work of this Section is extensive or complex enough to justify a conference.

* + - * 1. Preinstallation Conference: Conduct conference at Project site.
      1. SUBMITTALS
         1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
         2. Manufacturer’s installation instructions shall be provided along with product data.
         3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
         4. Quality Control Submittals:

Test and Evaluation Reports:

Product Test Reports: For each preformed joint seal, for tests performed by **[qualified testing agency] [manufacturer and witnessed by a qualified testing agency]**.

Sample warranties.

* + - * 1. Product Data:

Provide manufacturer’s installation instructions.

Preformed, foam joint seals.

Extruded-silicone joint seals.

Retain "Samples for Initial Selection" or "Samples for Verification" paragraph below, or both.

* + - * 1. Samples for Initial Selection: Manufacturer's color sheets, showing full range of available colors for each type of exposed preformed joint seal.
        2. Samples for Verification: Actual samples of each type and color of exposed preformed joint seal.

Size: 1/2-inch-wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint seals.

* + - * 1. Preformed Joint Seal Schedule: Include the following information:

Joint seal location and designation.

Joint width and movement capability.

Joint seal manufacturer and product name.

Joint seal color.

Retain "Sustainable Design Submittals" paragraph below if required to attain sustainability rating or to track sustainability submittals.

* + - * 1. Sustainable Design Submittals:
      1. BENCHMARKS
         1. Build Benchmarks **[to verify selections made under Sample submittals] [to demonstrate aesthetic effects] [and] [to set quality standards for materials and execution]**.

Build benchmark **[as indicated on Drawings] <Insert Benchmarks requirements>**.

Approval of Benchmarks does not constitute approval of deviations from the Contract Documents contained in Benchmarks unless Director’s Representative specifically approves such deviations by Change Order.

* + - 1. WARRANTY

When warranties are required, verify with Director’s Representative that warranties stated in this article are not less than remedies available to Director’s Representative under prevailing local laws.

* + - * 1. Special Installer's Warranty: Installer agrees to repair or replace preformed joint seals that fail in materials or workmanship within specified warranty period.

Verify available warranties and warranty periods for preformed joint seal installation.

Warranty Period: **[Two] <Insert number>** years from date of Substantial Completion.

* + - * 1. Special Manufacturer's Warranty: Manufacturer agrees to furnish preformed joint seals to repair or replace those that fail in materials or workmanship within specified warranty period.

Verify available warranties and warranty periods for preformed joint seals.

Warranty Period: **[Five] <Insert number>** years from date of Substantial Completion.

1. PRODUCTS

Before selecting manufacturers and products, verify availability, suitability for intended applications, and compliance with minimum performance requirements.

Product options commonly available from manufacturers are included in square brackets throughout the Section Text. Not every manufacturer listed can provide every option offered; verify availability with manufacturers.

* + - 1. SOURCE LIMITATIONS

Retain this article to limit sources for entire Section. Source limitations may also be specified in individual articles if desired.

* + - * 1. For preformed joint seals, obtain each color, type, and variety of joint seal from single source with resources to provide products of consistent quality in appearance and physical properties.
      1. PREFORMED, FOAM JOINT SEALS

For projects with preformed, foam joint seals in multiple locations, consider providing a schedule or giving each a number designation, such as "PJS-1" and "PJS-2," and creating an additional set of requirements and products for each variation.

* + - * 1. Preformed, Foam Joint Seals **<Insert drawing designation>**: Manufacturer's standard joint seal manufactured from urethane or EVA (ethylene vinyl acetate) foam with minimum density of 10 lb/cu. ft. and impregnated with a nondrying, water-repellent agent. Factory produce them in precompressed sizes in roll or stick form to fit joint widths based on design criteria indicated, with factory- or field-applied adhesive for bonding to substrates.

Design Criteria:

Nominal Joint Width: **[As indicated on Drawings] <Insert dimension>**.

If retaining "Minimum Joint Width" and "Maximum Joint Width" subparagraphs below, delete "Movement Capability" subparagraph below.

Minimum Joint Width: **[As indicated on Drawings] <Insert dimension>**.

Maximum Joint Width: **[As indicated on Drawings] <Insert dimension>**.

"-25 percent/+25 percent" option in "Movement Capability" subparagraph below is an example only; if retaining, revise as required. See the Evaluations for explanation of movement capability.

Movement Capability: **[As indicated on Drawings] [-25 percent/+25 percent] <Insert percentage>**.

Joint Seal Color: **[As indicated by manufacturer's designations] [Match Director’s Representative’s sample] [As selected by Director’s Representative from full range of industry colors] <Insert color>**.

* + - 1. EXTRUDED-SILICONE JOINT SEALS

For projects with extruded-silicone joint seals in multiple locations, consider providing a schedule or giving each a number designation, such as "PJS-1" and "PJS-2," and creating an additional set of requirements and products for each variation.

* + - * 1. Extruded-Silicone Joint Seals **<Insert drawing designation>**: Manufacturer's standard seal consisting of precured low-modulus silicone extrusion, with a neutral-curing silicone sealant for bonding extrusions to substrates.

Options in "Joint Seal Width" subparagraph below are examples only; if retaining, revise as required.

Joint Seal Width: **[4 inches] [Joint size indicated on Drawings plus 3/4 inch] [Joint size indicated on Drawings plus 1 inch] <Insert dimension>**.

Joint Seal Color: **[As indicated by manufacturer's designations] [Match Director’s Representative’s sample] [As selected by Director’s Representative from full range of industry colors] <Insert color>**.

* + - 1. MISCELLANEOUS MATERIALS

Retain "Primer" paragraph below if joint priming is required.

* + - * 1. Primer: Material recommended by preformed joint seal manufacturer for joint substrates indicated.
        2. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to preformed joint seal manufacturer, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces, and formulated to promote best adhesion to joint substrates.
        3. Masking Tape: Nonstaining, nonabsorbent material compatible with preformed joint seals and surfaces adjacent to joints.
        4. Sealant for Adhering Extruded-Silicone Joint Seals: Silicone adhesive sealant recommended by extruded-silicone joint seal manufacturer.

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine joints indicated to receive preformed joint seals, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting preformed joint seal performance.
          2. Proceed with installation only after unsatisfactory conditions have been corrected.
       2. PREPARATION

Retain "Surface Cleaning of Joints" paragraph below for preformed joint seals; delete for preformed, extruded-silicone joint seals.

* + - * 1. Surface Cleaning of Joints: Clean out joints immediately before installing preformed joint seals to comply with preformed joint seal manufacturer's written instructions and the following requirements:

Remove all foreign material from joint substrates that could interfere with adhesion of preformed joint seal, including dust, paints (except for permanent protective coatings tested and approved for seal adhesion and compatibility by seal manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.

Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimal bond with preformed joint seals. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

Retain porous substrates in first four subparagraphs below if applicable. Insert additional items to suit Project.

Concrete.

Masonry.

Unglazed surfaces of ceramic tile.

Exterior insulation and finish systems.

Remove laitance and form-release agents from concrete.

Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint seals. Nonporous joint substrates include the following:

Retain nonporous substrates in subparagraphs below if applicable. Insert additional items to suit Project.

Metal.

Glass.

Porcelain enamel.

Glazed surfaces of ceramic tile.

* + - * 1. Joint Priming: Prime joint substrates where recommended by preformed joint seal manufacturer or as indicated by tests or prior experience. Apply primer to comply with joint seal manufacturer's written instructions. Confine primers to areas of joint seal bond; do not allow spillage or migration onto adjoining surfaces.
        2. Masking Tape: Use masking tape where required to prevent contact of adhesive or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove smears. Remove tape immediately after tooling without disturbing joint seal.
      1. INSTALLATION
         1. General: Comply with preformed joint seal manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.
         2. Installation of Preformed, Foam Joint Seals:

Install each length of seal immediately after removing protective wrapping.

Firmly secure compressed joint seals to joint gap side to obtain full bond using exposed pressure-sensitive adhesive or field-applied adhesive as recommended by manufacturer.

Do not pull or stretch material. Produce seal continuity at splices, ends, turns, and intersections of joints.

For applications at low ambient temperatures, heat foam joint seal material in compliance with manufacturer's written instructions.

* + - * 1. Installation of Extruded-Silicone Joint Seals:

Apply masking tape to each side of joint, outside of area to be covered by seal system.

Apply silicone sealant to each side of joint to produce a bead of size complying with preformed silicone seal system manufacturer's written instructions and covering a bonding area of not less than 3/8 inch. Hold edge of sealant bead 1/4 inch inside masking tape.

Press silicone extrusion into sealant to wet extrusion and substrate. Use a roller to apply consistent pressure and ensure uniform contact with substrate.

Complete installation of seal system in horizontal joints before installing in vertical joints. Lap vertical joints over horizontal joints. At ends of joints, cut silicone extrusion with a razor knife.

* + - 1. PROTECTION
         1. Protect preformed joint seals from damage resulting from construction operations or other causes so seals are without deterioration or damage at time of Substantial Completion.
         2. Cut out, remove, and repair damaged or deteriorated seals so repaired areas are indistinguishable from original work.

END OF SECTION 079100