SPECIFICATION Division 07900

BS-50 Series Foam Backer Seal System

# PART 1 – GENERAL

* 1. **Summary**

1. The work shall consist of furnishing and installing expansion joints in accordance with the details shown on the plans and the requirements of the specifications. The joints are proprietary designs utilizing polyurethane foam impregnated with a waterproof polymer.
2. Related Work
   * + - Masonry
       - Precast concrete
       - Cast-in-place concrete
       - Curtain Walls
       - Metal Cladding
       - Sealants and caulking
       - Exterior insulation and finish systems

# 1.02 Submittals

1. Template Drawings - Submit typical expansion joint cross-section(s) indicating pertinent dimensioning of opening, profile recess and adjacent construction.

# Product Delivery, Storage and Handling

1. Deliver products in each manufacturer’s original, intact, labeled containers and store under cover in a dry location until installed. Store off the ground, protect from weather and construction activities.

# Acceptable Manufacturer

1. All joints shall be as designed and manufactured by EMS, Inc., 13311 Main Road, Akron, New York 14001.
2. Alternate manufacturers and their products will be considered, provided they meet the design concept and are produced of materials that are equal to or superior to those called for in the base product specification.
3. Any proposed alternate systems must be submitted and receive approval 21 days prior to the bid. All post bid submittals will not be considered. This submission shall be in accordance with MATERIALS AND SUBSTITUTIONS.

Any manufacturer wishing to submit for prior approval must provide the following:

1. A working 6” sample of the proposed system with a letter describing how system is considered superior to the specified system.
2. A project proposal drawing that illustrates the recommended alternate system installed in the vertical construction that is specific to the project. Typical catalog cut sections will not be considered.
3. Any substitution products not adhering to all specification requirements within will not be considered.

# 1.05 Quality Assurance

1. Manufacturer: Shall have a minimum of ten (10) years of experience specializing in the design and manufacture of expansion joint systems.

**PART 2 - PRODUCT**

# 2.01 General

1. Provide flexible profile manufactured from open micro-cell polyurethane foam impregnated with a hydrophobic, flame retardant, modified acrylic that is designed to provide protection against moisture and water intrusion. Profile shall be capable of providing a minimum of plus or minus 50% building movement and accommodate moderate variations in width of opening, complex directional change transitions, and resist ultraviolet degradation. Profile shall be installed without use of adhesives or invasive anchor systems.

Provide Pre-Compressed Foam Seal, Model BS-50 as manufactured by EMS, Inc. and as indicated on drawings for expansion joint and/or sealant locations.

# Materials

1. Seal - Profile shall be pre-formed and manufactured from polyurethane impregnated with a flame retardant modified acrylic that meets ASTM 518, ASTM 283 and DIN 18542. The profile shall meet the requirements of the properties listed in the table below.

# Physical Properties Test Method Results

Density 10 lb/ft3 (160 kg/m3)

Thermal Resistance ASTM C518 3.3 hr-oF-ft2/Btu Thermal Conductivity 0.05 W/m.°C

Temperature Stability Range -40°F to 212°F

Tensile Strength ASTM 3574 Meets 21 psi min.

Ultimate Elongation ASTM 3574 125% ±20%

Resistance to Compression Set ASTM 3574 Max 2.5% Shear Strength Min. 8N/cm2

Mildew Resistance Excellent

Flammability UL 94VO

ASTM E84

Self Extinguishing Flame Spread 0

Flash Point 590°F (310°C)

Water Resistance ASTM E331

ASTM E547

12 psf

1. psf

# 2.03 Fabrication

1. Seal profile shall be shipped in rolls (joint size 1/8” to 1-3/4”) or nominal five-foot standard lengths (joint size 2” or greater) in manufacturer’s standard shipping carton. Seals shall be cut to length on jobsite where required for straight lengths or directional change transitions utilizing appropriate tools, saws and miter boxes. All cuts shall be accurately measured and completed in a neat and workmanlike manner to ensure quality work.

# 2.04 Finishes

1. Seals - Standard color offering: Black and Concrete Gray

# PART 3 - EXECUTION

**3.01 Installation**

1. Where indicated and noted on the contract drawings, install seal profiles in a neat workmanlike manner. All surfaces to receive seals shall be free from dirt, water, frost, and any loose foreign debris that may be detrimental to effective joint sealing.
2. Installation contractor shall verify that seal profile is to be installed in the proper width opening for the appropriate temperature at time of installation. Variations in width or incorrect opening that may affect proper installation and product performance shall be brought to the attention of the architect and product manufacturer prior to installation.
3. Install seal profiles in strict accordance with the manufacturer’s typical details and installation procedure in conjunction with the advice of their qualified representative.

# 3.02 Clean and Protect

1. Protect seal profile during construction. After work has been completed in adjacent areas, clean exposed surfaces with a mild cleaner that will not harm or attack the silicone coating.

**END OF SECTION**