

# GUIDE SPECIFICATION FOR SPONGE RUBBER EXPANSION JOINT FILLER

## SECTION 03 15 00 – CONCRETE ACCESSORIES

### EXPANSION/CONTRACTION JOINT FILLER

Specifier Notes: This guide specification is written according to the Construction Specifications Institute (CSI) format. The section must be carefully reviewed and edited by the architect or engineer to meet the requirements of the project. Coordinate this section with other specification sections and the drawings.

Specifier Notes: W. R. MEADOWS® SPONGE RUBBER EXPANSION JOINT is produced to a uniform thickness and density from gray-colored, top-quality, blown sponge rubber. It is easily compressed and has a recovery of 95% or more of the original thickness and a density of not less than 30 pounds per cubic foot (480.56 kg per cubic meter).

SPONGE RUBBER EXPANSION JOINT is frequently used on bridge structures and sewage treatment plants that undergo rapid changes in temperature. Because of its excellent recovery capability during wide temperature variations, SPONGE RUBBER EXPANSION JOINT is used around supporting pillars, drains, hydrants, and lamp and sign posts, as well as in isolation applications or between materials having dissimilar coefficients of expansion.

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Installation of expansion/contraction joint filler.

##### 1.02 RELATED SECTIONS

Specifier Notes: Edit the list of related sections as required for the project. List other sections dealing with work directly related to this section.

- A. Section 03 00 00 - Concrete.
- B. Section 07 92 00 – Joint Sealants.

##### 1.03 REFERENCES

- A. AASHTO M 153 - Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
- B. ASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.
- D. Corps of Engineers CRD-C 509 - Standard Specifications for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
- E. FAA Specification Item P-610-2.7 - Structural Portland Cement Concrete.
- F. Federal Specification HH-F-341 F.

##### 1.04 SUBMITTALS

- A. Comply with Section 01 33 00 - Submittal Procedures.
- B. Submit manufacturer's product data and application instructions.

## 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Store materials in a clean, dry area in accordance with manufacturer's instructions.
- C. Store cartons in a weatherproof location for periods not longer than six months.
- D. Protect materials during handling and application to prevent damage.

## PART 2 PRODUCTS

### 2.01 MANUFACTURER

- A. W. R. MEADOWS, INC., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Fax (847) 683-4544. Web Site [www.wrmeadows.com](http://www.wrmeadows.com).

### 2.02 MATERIALS

- A. Performance-Based Specification: Expansion joint filler composed of top-quality, blown sponge rubber that shall conform to the following standards and have the following requirements:
  - 1. ASTM D 1752, Type I.
  - 2. AASHTO M 153, Type I.
  - 3. FAA Spec Item P-610-2.7.
  - 4. COE CRD-C-509, Type I.
  - 5. Federal Specification HH-F-341 F, Type II, Class A.
  - 6. Compression Deflection: 50 psi minimum at 50%
  - 7. Recovery at 50% for 10 minutes: 90% minimum
  - 8. Extrusion at 50% with 3 edges restrained:  $\leq 0.250$  inches
  - 9. Temperature Range: -20°F to 160°F
  - 10. Density: 30 pcf minimum
  - 11. Water Absorption, %: 0.1 maximum

Specifier Notes: Specify the thickness of the expansion-contraction joint filler according to project requirements. Joint type and spacing will vary with each project according to the type of structure, climatic conditions, and anticipated stresses in the concrete. The coefficient of thermal expansion in concrete is 0.0000055 per linear inch of concrete per degree Fahrenheit of temperature change, yielding approximately .66 inch of movement per 100 feet with a 100° F (38° C) temperature range. To estimate expansion, multiply length in inches x number of degrees of anticipated temperature differential x 0.0000055. Use the resulting anticipated movement to determine correct thickness of the control joint and proper spacing for placement of the joint. Thinner joints (1/4", 3/8", or 1/2") (6.35 mm, 9.53 mm, or 12.7 mm) spaced at frequent intervals offer greater control than thicker joints spaced at greater intervals. The basic concept is to provide ample room for the concrete to expand and contract without creating damaging stresses and resultant cracking.

- 12. Thickness: [1/4"] [3/8"] [1/2"] [3/4"] [1"];

- B. Proprietary-Based Specification: SPONGE RUBBER EXPANSION JOINT Filler by W. R. MEADOWS.

### 2.03 ACCESSORIES

- A. Expansion Joint Cap: SNAP-CAP® by W.R. MEADOWS.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Examine areas to receive expansion/contraction joint filler. Notify Architect or Engineer if areas are not acceptable. Do not begin application until unacceptable conditions have been corrected.

### 3.02 APPLICATION

- A. Install expansion/contraction joint filler in accordance with manufacturer's instructions.
- B. Position joint filler against walls, at interrupting objects or columns, and against abutting structures before concrete placement.
- C. Install joint filler 1/2" (6 mm) below concrete finish level.
- D. Slide expansion joint cap over the expansion joint, prior to application of joint sealant.
- E. Place concrete and allow to cure.
- F. Insert screwdriver through the top of expansion joint cap, pull free and discard.
- G. Seal with suitable joint sealant.

### 3.03 PROTECTION

- A. Protect area from traffic until joint sealant is fully cured.

END OF SECTION