



Minimize Concrete Cracking and Damage with

# CONCRETE EXPANSION JOINTS

Whatever your needs...  
we have the  
solution.



GUARDIAN OF THE PAVEMENT



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#BR-18

# CONCRETE EXPANSION JOINTS

## W. R. MEADOWS

### The Innovator in Concrete Expansion Joint Technology

Concrete expands and contracts with temperature and moisture changes. When the temperature rises or the moisture content of the concrete increases, expansion takes place. When temperatures drop, the concrete will contract. The provision to accommodate movement at predetermined locations with proper joint applications prevents the development of stresses that could crack the concrete.

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 0.000055 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 0.000055. 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.

**W. R. MEADOWS** is the innovator in expansion joint technology. Our ASPHALT EXPANSION JOINT was developed in 1926 and to this day is still used in concrete surfaces throughout the world to help minimize damage as concrete expands and contracts. A wide array of product types are available, including patented (U.S. patent numbers 7,815,872; 8,057,638; 8,038,845; 8,241,463; 6,068,804) fiber-based products, plastic compositions, and epoxy-type fillers. Full details, including sizes, installation procedures, and features/benefits, are available on the individual product data sheets available at [www.wrmeadows.com](http://www.wrmeadows.com). Here is the expansion joint technology that **W. R. MEADOWS** offers:



*Ignoring expansion joints in pavement construction can lead to various problems.*

## FIBRE EXPANSION JOINT

is composed of cellular fibers securely bonded together and uniformly saturated with asphalt to assure longevity. Wherever a cost-effective joint filler is required, FIBRE EXPANSION JOINT meets the need. Manufactured and marketed by W. R. Meadows since the early 1930s, FIBRE EXPANSION JOINT is backed by over 90 years of proven application experience. FIBRE EXPANSION JOINT is versatile, resilient, flexible, and non-extruding. When compressed to half of its original thickness, it will recover to a minimum of 70% of its original thickness. FIBRE EXPANSION JOINT will not deform, twist, or break with normal on-the-job handling. Breakage, waste, and functional failure resulting from the use of inferior, foreign fiber materials can cost you time and dollars and can result in a substandard finished job, generating costly callbacks and rework expenses. However, the purchase and installation of FIBRE EXPANSION JOINT (a small segment of the total project's cost) contributes to both the final cost efficiency and functional success, far greater in proportion than its original cost. (U.S. patent numbers 7,8158,772; 8,057,638; 8,038,845; 8,241,463; 6,068,804)

### SPECIFICATIONS:

- ASTM D1751
- AASHTO M 213
- CRD-C 508 (Corps of Engineers)
- Federal Specification HH-F-341F, Type I
- FAA Item P-610-2.7



## X-FOAM™

expansion joint filler is a flexible, lightweight, non-staining, polypropylene, closed-cell expansion joint filler. It is a chemical-resistant, ultraviolet stable, non-absorbent, low density, cost-effective, compressible foam that offers an extended service life in both interior and exterior applications.

### SPECIFICATIONS:

- ASTO D8139-17
- ASTM D1751



## ASPHALT EXPANSION JOINT

is composed of a blend of asphalts and mineral fillers formed under heat and pressure between two asphalt-saturated liners. It is waterproof, permanent, flexible, and self-sealing.

### SPECIFICATIONS:

- ASTM D994
- AASHTO M 33
- Federal Specification HH-F-341 F
- FAA Item P-610-2.7
- California Department of Transportation (Caltrans)

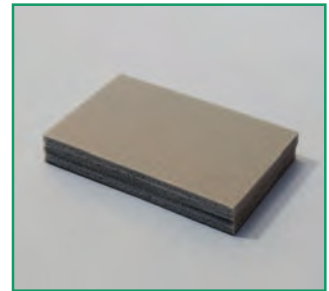


## CERAMAR®

flexible foam expansion joint filler is composed of a unique blend of isomeric polymers in a very small, closed-cell structure. Gray in color, CERAMAR is a lightweight, highly flexible, and resilient material offering recovery qualities of over 99%. This mini closed-cell structure is virtually non-absorbent. It can be wrapped or formed around curved or circular surfaces.

### SPECIFICATIONS:

- ASTM D1752 [Sections 5.1-5.4, with compression requirement modified to 10-25 psi (0.07 - 0.17 MPa)]
- ASTM D5249, Type 2 - ASTM D7174
- ASTM D7174



## DECK-O-FOAM®

expansion joint filler is a flexible, lightweight, non-staining, polyethylene, closed-cell expansion joint filler. It is a chemical-resistant, ultraviolet stable, non-absorbent, low density, economical, compressible foam that offers an extended service life in both interior and exterior applications. Product is ideal for decorative concrete installations.

### SPECIFICATIONS:

- ASTM D4819, Type II
- ASTM D4819-II\*

\*1/2" = ASTM D4819, Type II-W2, B5, D2, L6, S3, T13, T24

\*1/4" = ASTM D4819, Type II-W2, B7, D1, L6, S3, T14, T24



## CORK EXPANSION JOINT

is produced from clean, selected, granulated cork bonded with a synthetic resin. It is highly resilient, will compress without extrusion, and recovers to 95% of its original thickness after 50% compression.

### SPECIFICATIONS:

- ASTM D1752, Type II
- AASHTO M 153, Type II
- CRD-C 509 Type II (Corps of Engineers)
- Federal Specification HH-F-341F, Type II, Class B
- FAA Item P-610-2.7

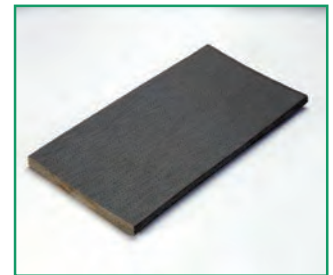


## SPONGE RUBBER EXPANSION JOINT

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).

### SPECIFICATIONS:

- ASTM D1752, Type I
- AASHTO M 153, Type I
- CRD-C 509, Type I (Corps of Engineers)
- Federal Specification HH-F-341F, Type II, Class A
- FAA Item P-610-2.7



## SELF-EXPANDING CORK EXPANSION JOINT

is formed and compressed under heat and pressure to permit expansion up to 140% of original thickness after installation, which permits the filler to compensate for concrete shrinkage. Normal humidity conditions after installation activate the self-expanding properties of the cork. Product may be cut on jobsite to exact size required. Product is ideal for water-retaining structures.

### SPECIFICATIONS:

- ASTM D1752, Type III
- AASHTO M 153, Type III
- CRD-C 509 Type III (Corps of Engineers)
- Federal Specification HH-F-341F, Type II, Class C
- FAA Item P-610-2.7



# PLSATIC JOINT MATERIALS

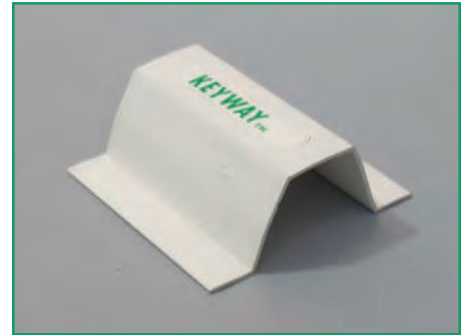
## SNAP-CAP®

provides a time and cost-saving method for forming straight, uniform and debris-free joints of the proper configuration, ready to seal. The top of SNAP-CAP pulls free and can be discarded. The exposed concrete surfaces assure balanced adherence to the sides. It is ideal for both horizontal and vertical concrete projects.



## KEYWAY™

is lightweight, flexible and an easy way to mold a keyed tongue and groove construction joint. KEYWAY resists impact and will not whip or warp. It strips quickly and can be reused or left in place.



## DECK-O-JOINT®

is a decorative expansion joint for use wherever concrete is placed. It is economical, long lasting and trouble-free. DECK-O-JOINT resists acids, alkali, chlorine, etc. A light hose down keeps it bright and clean.



## SPEED-E-JOINT®

offers an ideal solution to controlling cracks in concrete. It is a rigid preformed contraction joint that produces a straight-line crack on the surface of concrete slabs and locks into the aggregate just below the surface. SPEED-E-JOINT is strong, economical and eliminates waste in providing straight lines. It is quick and easy to install. The top section pulls free once the joint has been placed correctly in the wet concrete.



## POURTHANE® NS

POURTHANE NS is an elastomeric, low-modulus, one-component, moisture-curing, non-sag, polyurethane sealant. The product requires no mixing and typically requires no priming to bond to many materials, including concrete and masonry.

POURTHANE NS has very good adhesion to most construction materials. It is particularly recommended for expansion joints between precast concrete panels and seams on wooden, metal, aluminum, and PVC joinery. POURTHANE NS is highly recommended for bonding concrete and baked clay roof tiles. The product is designed for the civil and industrial construction markets.



## POURTHANE SL

POURTHANE SL is an elastomeric, one-component, self-leveling, non-bubbling, premium-grade polyurethane sealant specifically developed to be used as a multi-purpose horizontal joint sealant. The product is a moisture cure sealant with excellent adhesive properties and resistance to aging and weathering.



POURTHANE SL is used to seal horizontal joints in concrete, such as sidewalks, balconies, pavement, terraces, warehouses, factories, civil structures, plazas, and runways. POURTHANE SL may also be used as a pitch pan sealant.



POLYURETHANES  
JOINT SEALANTS



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