



EVACON EXPANSION JOINT SYSTEM

GENERAL

Evacon is a closed cell crosslinked Copolymer foam that has been specially formulated as an expansion/contraction waterproof joint material, suitable for use in both new construction and rehabilitation projects.

It withstands 25% - 50% compression, and when epoxied in place, 25% tension without damage to its original properties. The low density, closed cell, cross-linked **E**thylene **V**inyl **A**cetate foam can be cut to any size and incorporated into a variety of joint designs to meet the most demanding conditions.

SURFACE PREPARATION

All existing coatings, caulking, oils, laitancies and surface contaminants must be removed to insure maximum adhesion. Steel angles and epoxy mortars must be thoroughly sandblasted.

PHYSICAL PROPERTIES

Density Range, pcf (ASTM D 3575-91) Suffix: W Method A	2.0 – 3.0
Compressive Strength, psi (ASTM D-1056) at 25% Deflection	4 - 6
Compression Set, Percent of Original Thickness 22 hours loading, 24 hours recovery (ASTM D-1056) at 50% Deflection	15 maximum
Tensile Strength, psi (ASTM D 35 75-91) Suffix: T	36 - 50
Elongation, % to Break (ASTM D 35 75-91) Suffix: T	250 -300
Tear Resistance, lb./in. (ASTM D-624) Die-C	7 - 10
Lowest Recommended Working Temperature	-70°C (-94°F)
Highest Continuous Temperature Resistance	50°C (122°F)

CHEMICAL RESISTANCE

Evacon Foam is resistant to weak mineral acids and alkalis. Oils, gasolines and most solvents swell the foam. It's chemical resistance is suitable for most above and below ground applications. For specific chemical environment please check with Concrete Chemicals.

WEATHERING

Evacon Foam has demonstrated excellent durability, with no degradation on exposure for a period of 10 years and meets Federal Specification HH-F-341 A Type 1 Standard Class A.



JOINT SIZE

Evacon Foam for an expansion joint must be sized so that it always operates in compression. Thirty percent (30%) compression is the maximum possible when installing the joint system. During operation 50% compression is the maximum allowable before compression forces begin to break down the cell structure. The joint system is capable of operating in tension but an expansion greater than 20% is not recoverable and it is prudent to design the joint to work in compression.

If this is not possible in the existing joint, then it should be enlarged to allow for proper installation. The expected movement of the joint must be calculated and the size of the Evacon Foam determined based on that. The method of calculation is outlined in the Joint Selection Chart.

If the expected movement is 3/4" the minimum joint size should be in the region of 2". This can vary depending on the substrate temperature at the time of installation.

TEMP. OF SUBSTRATE	COMPRESSION AT TIME OF INSTALLATION	SAFE MOVEMENT TO COLDEST (TEMP.) HOTTEST	
90°F	0.7" (35%)	0.7"	0.3"
60°F	0.5" (25%)	0.5"	0.5"
30°F	0.3" (15%)	0.3"	0.7"

INSTALLATION

When installing Evacon Expansion Joint Systems it is important to prevent the foam from extruding sideways. This can be prevented by applying force in the direction of the already installed portion.

Concrete Chemicals #906 is applied to both the substrate or joint walls and the Evacon (Mfg. laminations must be parallel to the wearing surfaces). The material is installed as a continuous unit by heat welding additional sections with a Teflon coated iron, or Butane torch, or cementing joints together with the #906 Epoxy. It is compressed 20 - 25% for installation in the actual joint opening. All excess epoxy **MUST** be cleaned from the Evacon wearing surface.

It is necessary that Evacon be installed in a joint with parallel sides. If installed in joints of other configuration it will extrude before the Bonder cures.

For maximum adhesion, it is advisable to roughen the sides of the joint (by a hand grinder or sandpaper) and the sides of the joint, by grinding or sandblasting, prior to applying the epoxy.