

# EVACON EXPANSION JOINT

## DESCRIPTION

Evacon is a closed cell cross-linked 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 Ethylene Vinyl Acetate foam can be cut to any size and incorporated into a variety of joint designs to meet the most demanding conditions.

## WHERE TO USE

- sealing joints on bridges, parking decks, stadiums, buildings and waste water treatment facilities
- repair of existing joints
- both horizontal or vertical application
- expansion joints with varying joint widths

## BENEFITS

- accommodates joint movement
- accommodates tension (when epoxied in place)
- minimizes dirt and debris in joint openings
- quick joint repairs.
- excellent durability with no degradation on exposure to weathering

## PROPERTIES

See attached physical properties for 2lb and 3lb density

## APPLICATION

### Surface Preparation:

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

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

## INSTALLATION

### 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 the 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 19mm (3/4") the minimum joint size should be in the region of 50mm (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	
32° C (90° F)	17.8mm (0.7") (35%)	17.78mm (0.7")	7.62mm (0.3")
15.5° C (60° F)	12.7mm (0.5") (25%)	12.7mm (0.5")	12.7mm (0.5")
-1.1° C (30° F)	7.62mm (0.3") (15%)	7.62mm (0.3")	17.78mm (0.7")

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.

CPD® #906 Gel Epoxy (Grey) 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 Gel 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 configurations it will extrude before the Bonder cures.

#### **LIMITATIONS**

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

#### **PACKAGING**

2lb and 3 lb. Density 1.2 m (4 ft.) x 2.4 m (8ft) cut sizes available upon request

#### **STORAGE**

Store indoors or outdoors under a tarp.

#### **SHELF LIFE**

Indefinite

#### **SAFETY PRECAUTIONS**

Consult Safety Data Sheet for special instructions.  
SDS#69

#### **WARRANTY**

The recommendations made and the information herein is based on our own and independent laboratory experience, and is believed to be accurate under controlled conditions. However, no warranty or guarantee of accuracy is made because we cannot cover every possible application of product nor anticipate every variation encountered in weather conditions, job-conditions, methods used and types of surfaces on which the product is applied. The users shall make their own tests to determine the suitability of such products for any particular purpose.

CPD® makes no warranties with respect to this product, expressed or implied, without limitation, the implied warranties of merchantability or fitness for a particular purpose.

CPD®'s liability shall be limited in all events to supplying sufficient product to re-treat and/or repair the specific area to which CPD® product has been applied.

CPD® reserves the right to have the true cause of any difficulty determined by accepted test methods. CPD® shall have no other liability, including liability for incidental, consequential or resultant damages, however caused, whether due to breach of warranty, negligence, or strict liability.

THIS WARRANTY MAY NOT BE MODIFIED OR EXTENDED BY REPRESENTATIVES OF CPD® ITS DISTRIBUTORS OR DEALERS



**PHYSICAL PROPERTIES- 2 LB DENSITY**

PHYSICAL PROPERTIES		TEST METHOD	VALUES	USA UNITS	VALUES	METRIC UNITS
Density- Nominal		ASTM D3575	2	lb./ft <sup>3</sup>	32.04	kg/m <sup>3</sup>
Tensile Strength		ASTM D3575	45	psi	310	kPa
Tear Strength		ASTM D3575	9.4	lb./in	1.75	n/mm
Elongation		ASTM D3575	290	%	290	%
Firmness		ASTM D2240	23	Asker C	23	Asker C
<b>Compressive Stress</b>						
Compression Set	50% 24 hr.	ASTM D3575 Suffix B	20	%	20	%
Compression Strength	25%	ASTM D3575 Suffix D	5.2	psi	30	kPa
	50%		12.2		84	
Working Temperature Range		Internal Test	-40 to 180	°F	-40 to 82	°C
Water Absorption		ASTM D3575	1.5%	By volume		
Flammability		FMVSS 302	Pass			

DIMENSIONS (net)		
THICKNESS	WIDTH	LENGTH
6.35mm (1/4") to 100mm (4")	1219mm (48")	2438mm (96")


ADDITIONAL ASPECTS
Colors- charcoal, white, grey

The data on this technical data sheet should be used as a guideline for product selection. This data is not intended to represent, replace or be used as a proxy for a specific product sales specification. The physical properties are averages based on limited production runs and are subject to change as additional data becomes available.

**PHYSICAL PROPERTIES- 3 LB DENSITY**

PHYSICAL PROPERTIES		TEST METHOD	VALUES	USA UNITS	VALUES	METRIC UNITS
Density- Nominal		ASTM D3575	3	lb./ft <sup>3</sup>	48	kg/m <sup>3</sup>
Tensile Strength		ASTM D3575	60	psi	414	kPa
Elongation		ASTM D3575	400	%	400	%
Firmness		ASTM D2240	23	Asker C	23	Asker C
<b>Compressive Stress</b>						
Compression Set	50% 24 hr.	ASTM D3575 Suffix B	<15	%	<15	%
Compression Strength	25%	ASTM D3575 Suffix D	9	psi	62	kPa
	50%		18		124	
Working Temperature Range		Internal Test	-40 to 225	°F	-40 to 107	°C
Water Absorption 7 Days		ASTM D1667	-0.123	Lbs./sq. ft.		
Flammability		FMVSS 302	0.25" pass	Pass/Fail	1.92"/min	Burn Rate

DIMENSIONS (net)		
THICKNESS	WIDTH	LENGTH
6.35mm (1/4") to 100mm (4")	1220mm (48")	2439mm (96")

ADDITIONAL ASPECTS
Colors- charcoal, white, grey

\*Testing done according to ASTM D3575 & ASTM C177 (Thermal conductivity) standards

The data on this technical data sheet should be used as a guideline for product selection. This data is not intended to represent, replace or be used as a proxy for a specific product sales specification. The physical properties are averages based on limited production runs and are subject to change as additional data becomes available.