Expansion Joint Systems

V-Seal Expansion Joint System

Product Description

V-Seal is a preformed extruded EPDM seal that can be bonded to concrete, steel or elastomeric concrete with a quick-setting epoxy-adhesive.

Basic Uses

Typical applications include: control joint and expansion joints for both new and rehabilitation projects for bridges, highways, parking structures, stadiums, plazas, water and sewage treatment facilities and other types of concrete construction.

Advantages

- EPDM seal is weather, UV, ozone and tear resistant
- Designed for use under extended water immersion
- Flexible at lower temperatures
- Epoxy-adhesive bonds in excess of 3000 PSI
- Epoxy available in 22 oz. cartridges
- Easy rehabilitation of existing expansion joints
- Quick installation
- Movements of .5” to 4”
- Full cure of the epoxy-adhesive at 70° F is 24 hours

Property	Test Method	Requirement
Tensile Strength	ASTM D412	1200 PSI Min
Elongation	ASTM D412	400% Min
Durometer Content	ASTM D2240	50±5
Ozone Resistance	ASTM D1171	100 Min
Water Resistance - 70 Hrs at 100°C	ASTM D471	10% Max
Tear Strength	ASTM D624 (Die C)	150 PLI

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Product Installation

1. Preparatory Work: Through surface preparation ensures a dry, clean, sound joint edge and is essential for a good horizontal joint sealant application. All joint faces should be cleaned by either sandblasting, power wire-brushing, or by grinding the edge to ensure a clean and sound substrate.
2. Uncoil the seal and allow it to relax. Apply the conditioning agent to bottom and top of the lug. Wire-brush or lightly sandblast the surface to receive the epoxy-adhesive. When done properly, the shine of the surfaces will be removed and roughened, obtaining a dull, tacky surface. Apply the rubbing/denatured alcohol scrubbing vigorously into the ribs using a stiff nylon brush or clean, alcohol-soaked rags.
3. Apply a bead of adhesive to the upper and lower surface of the lug. Install the seal to the proper height in the joint opening. Joint openings wider than 3" may require use of external materials (foam fillers) to help keep product in place while the adhesive is curing.
4. After the seal is in place, apply a bead of adhesive to both sides of the top of the lug, filling the area up to the serrated edges on the seal.
5. Tool the adhesive to ensure contact with the serrated edges on the seal and the vertical surface.

Minimum installation temperature for V-Seal is 40°F

Complete installation instructions are available on dsbrown.com/bridges/expansion-joint-systems/v-seal.

V-Seal Chart

Property Name	Nominal Width	Nominal Height	Maximum Movement	Narrowest Opening	Widest Opening	Minimum Depth
V-300	4.5"	2.25"	3.00"	.625"	3.625"	2.5"
V-400	5.5"	2.25"	4.00"	1.00"	5.00"	2.5"

V-Seal Adhesive Properties

The V-Seal adhesive meets the requirements of ASTM C881 Type III, Grade 2. The adhesive shall also have the following properties:

Property	Test Method	Requirement
Gray Color		
Viscosity		45,000 cP (typical)
Gel Time	ASTM C881	30 Minutes Min
Shelf Life (in separate sealed containers)		12 Months