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Delastic® Preformed Pavement Seals

Pavements



- Meets ASTM D-2628
- FAA P604
- USACE TSC 32 13 73



Bridge the World with Leading Infrastructure Solutions

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Delastic® Preformed Compression Seals

Delastic Preformed Pavement Seals for concrete pavement have one main purpose: to prevent water and debris from entering the joint. If that happens, the pavement can crack, chip, buckle and prematurely deteriorate. Delastic Seals can be used on both new joints and during joint reseal projects as long as the joints are not spalled and are in good overall shape.

Delastic Seals are also known as compression joint seals. They are installed in a compressed state and remain in contact with the joint walls while allowing the concrete pavement to expand and contract during temperature changes. Delastic Seals are extruded from compounds of polychloroprene (neoprene) which meet or exceed current ASTM standard specifications.

Delastic® Preformed Pavement Seal Advantages

Delastic® Preformed Pavement Seals are the primary sealing system for concrete pavement slabs in highways, airport aprons and runways. Delastic® Preformed Pavement Seals offer these advantages:

- Dramatic reduction in concrete joint spalling
- Extended performance life (15-25 years)
- Resistance to jet fuel, de-icing fluids and other chemicals
- Installation is not weather sensitive
- Speed of installation
- Product cleanliness
- No sandblasting required
- Ease of inspection
- Resistant to rubber removal processes



Delastic® Preformed Pavement Seal installation at McCarran International Airport Las Vegas, Nevada



Delastic® Preformed Pavement seals effectively protect concrete pavement in highways, airport aprons and airport runways by keeping moisture, debris and incompressible material out of the joint opening.

Meeting Specifications

Delastic® Preformed Pavement Seals meet or exceed:

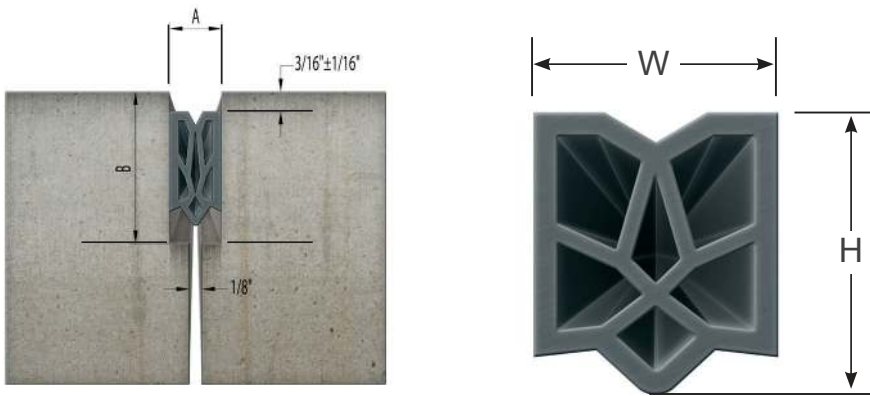
- **ASTM D 2628**
- **CRD-C 548**
- **FAA P604**
- **AASHTO M-220**
- **USACE TSC 32-13-73**
- **USACE 02762**

Delastic® Preformed Pavement Seals meet ASTM standard specifications. They are also recognized by the FHWA, U.S. Army Corps of Engineers, U.S. Air Force, FAA, consulting engineers and other agencies as an effective, long-lasting concrete pavement joint seal solution.

Delastic® Preformed Pavement Seals have been successfully used on high performance concrete pavements throughout the U.S. Many of these installations have protected pavements located in extreme hot and cold climates in excess of 20 years.



Airports, including military bases all over the world rely on Delastic® Preformed Pavement Seals.



Typical joint design for the "E" and "V" series pavement seals



40-year-old Preformed Compression Seal at DFW Airport.

Delastic® Preformed Pavement Seal Characteristics

Delastic® Seal Catalog No.	Seal Characteristics			Joint Installation Criteria		Total Joint Movement	
	Nominal Width	Nominal Height	Max. Movement	Minimum Depth	Typical Installed Width**	Narrowest Opening	Widest Opening
E-437	0.437 (11.11)	0.937 (23.81)	0.153 (3.88)	1.000 (25.40)	0.250 (6.35)	0.219 (5.56)	0.372 (9.45)
E-562	0.562 (14.29)	0.625 (15.88)	0.188 (4.78)	1.063 (27.00)	0.3125 (7.94)	0.290 (7.37)	0.478 (12.14)
E-686	0.687 (17.46)	0.687 (17.46)	0.259 (6.59)	1.188 (30.18)	0.375 (9.53)	0.325 (8.26)	0.584 (14.84)
E-816	0.812 (20.64)	0.830 (21.08)	0.313 (7.95)	1.438 (36.53)	0.500 (12.70)	0.378 (9.59)	0.691 (17.54)
E-1006	1.000 (25.40)	1.000 (25.40)	0.450 (11.43)	1.625 (41.28)	0.5625 (14.29)	0.400 (10.16)	0.850 (21.59)
E-1256	1.250 (31.75)	1.000 (25.40)	0.563 (14.30)	1.875 (47.63)	0.750 (19.05)	0.500 (12.69)	1.063 (26.99)
V-1625	1.625 (41.28)	1.125 (28.58)	0.631 (16.03)	2.250 (57.15)	0.875 (22.23)	0.750 (19.05)	1.381 (35.08)
E-2000	2.000 (50.80)	1.500 (38.10)	0.950 (24.13)	2.500 (63.50)	1.125 (28.58)	0.750 (19.05)	1.700 (43.18)
E-2500	2.500 (63.50)	2.500 (63.50)	1.125 (28.58)	3.375 (85.73)	1.375 (34.93)	1.000 (25.40)	2.125 (53.98)
E-3000	3.000 (76.20)	2.500 (63.50)	1.550 (39.37)	4.000 (101.60)	1.750 (44.45)	1.000 (25.40)	2.550 (64.77)

Above: First number shown in bold represents inches, metric dimensions (mm) are shown in parentheses.

Contractor Notes: **Widening the joint below the Typical Installed Width can lead to installation issues. The narrowest and widest opening are a range the joint can move in, not a range the seal should be installed in. The wearing of saw blades can decrease the typical installed joint width. Joint measurements should be taken throughout the widening process. Be aware that temperature changes can influence the joint width during the widening process. The minimum depth is required to allow enough room for the seal to move without bottoming out. This minimum depth does not account for a bevel. If a bevel is used the minimum depth needs to be increased by the overall height of the bevel.

Pavements

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Delastic® Preformed Pavement Seal Installation

Delastall™ Kompressor – fully automated installation machine that also applies the lubricant adhesive. Can install seals from 7/16” to 1-5/8”

Trough & Tapper™ for seals from 1-1/4” to 3”.

Lubricants

DSB 1516 and DSB 1520 lubricant adhesives are used during installation to lubricate the seal when it is inserted into the joint opening. The minimum installation temperature on job sites should be 40°F (4°C) to ensure proper performance of the lubricant adhesive.

Material Specifications

For Delastic® Preformed Pavement Seals, ASTM standard specification D 2628 applies. DSB 1516 lubricant adhesive meets ASTM D 2835 requirements while DSB 1520 lubricant adhesive meets ASTM D 4070.



Delastall® Kompressor for seals from 7/16 to 1-5/8 inches

Delastic® Preformed Pavement Seal Properties

ASTM D 2628 Delastic® Preformed Pavement Seals Physical Requirements		
Properties	Requirements	ASTM Test Method
Tensile strength, min, psi (MPa)	2000 (13.8)	D 412
Elongation at break, min %	250	D 412
Hardness, Type A durometer, points	55±5	D 2240 (modified) ^A
Oven aging, 70 h at 212°F (100°C)		D 573
Tensile strength, loss, max, %	20 max	
Elongation, loss, max, %	20 max	
Hardness, Type A durometer, points change	0 to + 10	
Oil swell, ASTM Oil No. 3, 70 h at 212°F (100°C)		D 471
Weight change, max, %	45 max	
Ozone resistance		D 1149 (modified) ^B
20% strain, 300 pphm in air, 70 h at 104°F (40°C)	no cracks	
Low-temperature stiffening, 7 days at 14°F (-10°C)		D 2240
Hardness, Type A durometer, points change	0 to + 15	
Low-temperature recovery, ^C 72 h at 14°F (-10°C)		
50% deflection, min, %	88	9.2 ^D
Low-temperature recovery, ^C 22 h at -20°F (-29°C)		
50% deflection, min, %	83	9.2 ^D
High-temperature recovery, ^C 70 h at 212°F (100°C)		
50% deflection, min, %	85	9.2 ^D
Compression-deflection, at 80% of nominal width, min, lbf/in. (N/m)	3.5 (613)	9.3 ^D



Trough & Tapper™ for seals from 1-1/4 to 4 inches nominal width

A The term “modified” in the table relates to the specimen preparation. The use of joint seal as the specimen source requires that more plies than specified in either of the modified test procedures be used. Such specimen modification shall be agreed upon by the purchaser and seller prior to testing. The hardness test shall be made with the durometer in a durometer stand as recommended in Method D 2240.

B Test in accordance with Procedure A of D 518.

C Cracking, splitting, or sticking of a specimen during a recovery test shall mean that the specimen has failed the test.

D The reference sections are those of this specification.