

BR-Series (Compression Seal)

Description

This product is an extruded elastomeric configuration that, will seal the expansion or contraction joint opening from the intrusion of water and debris. The cross-section has an arrangement of internal webs designed to exert a continuous and uniform horizontal force against the joint walls. It is designed to exist in constant compression throughout the range of joint movement.

The BR-Series shapes are engineered with a heavy-duty web structure exerting maximum force for heavy traffic and high load application. The configuration features a one to one width/depth ratio, with a progression of internal diamond-shaped web constructions. Movement is absorbed in a single center groove dividing two virtually horizontal top webs, which collapse upward upon closure.

This design is especially suitable for bridge and large structure applications. To handle the impact of vehicular and particularly truck traffic the seal is installed between steel armored edge angles.

LEED Credits - One (1) LEED credit depending on the location of the project

Physical Properties

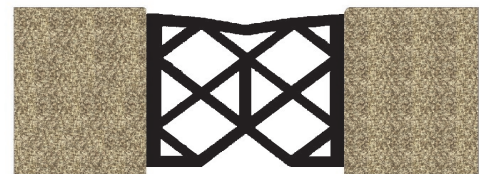
The system consists of two items: a compression seal and a lubricant-adhesive.

The compression seal is available in various widths. The neoprene sealer is black in color. Physical properties are given in Table 1.

The lubricant-adhesive is a single-part, moisture-curing polyurethane and aromatic hydrocarbon solvent mixture. It conforms to properties presented in ASTM D4070 and shown in Table 2.

| Property | ASTM Test Method | Requirement |
|------------------------------------|------------------|--------------|
| Tensile strength, min. | D412 | 2000 psi |
| Elongation at break, min. | D412 | 250% |
| Hardness, Type A durometer | D2240 | 55 +/-5 |
| Oven aging, 70h @ 212° F | D573 | |
| Tensile strength, max. | | 20% loss |
| Elongation, max. | | 20% loss |
| Hardness, Type A duro. | | 0 to +10 pts |
| Oil swell, ASTM Oil No. 3 | | |
| 70h @ 212 °F | | |
| Weight change, max. | D471 | 45% |
| Ozone resistance, 20% strain | D1149 | |
| 70 hours aging, D573, 3 ppm in air | | No cracks |

| Property | Test Method Section | Requirement |
|--------------------------|---------------------|--|
| Solids Content, min % | 10.1 | 60 |
| Homogeneity | | Shall be uniform, no lumps Or agglomerates, no settlement in container |
| Shear Ratio at: | | |
| Min: | | |
| At 20,000 to 100,000 | cP | 1.5 |
| At 100,001 to 200,000 | cP | 2.0 |
| At 200,001 to 300,000 | cP | 2.5 |
| Max | | 4.0 |
| Lubricating life, min. h | 10.3 | 2 |
| Sag | 10.4 | No sagging |
| Peel strength test | 10.5 | Max. Length peeled from Concrete within 3 min. |
| 500-g load | | None |
| 1000-g load | | 12mm (1/2 in.) |
| Shelf life | 11.1 | For 6 months after Manufacturer |



| Product | Joint Recess Depth IN (MM) | Min. Width IN (MM) | Dim. Mid-Range IN (MM) | Max. Width IN (MM) | Total Movement IN (MM) | Width IN (MM) | Height IN (MM) |
|---------|----------------------------|--------------------|------------------------|--------------------|------------------------|----------------|----------------|
| BR-125 | 1.63'' (41.4) | 0.56'' (14.2) | 0.81'' (20.6) | 1.06'' (26.9) | 0.50'' (12.7) | 1.25'' (31.8) | 1.25'' (32.0) |
| BR-162 | 2.25'' (57.2) | 0.73'' (18.5) | 1.05'' (26.7) | 1.38'' (35.1) | 0.60'' (15.0) | 1.63'' (41.4) | 1.88'' (48.0) |
| BR-175 | 2.40'' (61.0) | 0.79'' (20.1) | 1.14'' (29.0) | 1.49'' (37.8) | 0.70'' (18.0) | 1.75'' (44.4) | 1.75'' (44.4) |
| BR-200 | 2.75'' (69.9) | 0.95'' (24.0) | 1.30'' (33.0) | 1.70'' (43.2) | 0.75'' (19.0) | 2.00'' (50.8) | 2.00'' (50.8) |
| BR-225 | 3.00'' (76.2) | 1.01'' (25.7) | 1.46'' (37.1) | 1.91'' (48.5) | 0.90'' (23.0) | 2.25'' (57.2) | 2.33'' (59.0) |
| BR-250 | 3.20'' (81.3) | 1.13'' (28.7) | 1.63'' (41.4) | 2.13'' (54.1) | 1.00'' (25.0) | 2.50'' (63.5) | 2.50'' (63.5) |
| BR-300 | 4.25'' (107.9) | 1.34'' (34.0) | 1.94'' (49.3) | 2.55'' (64.8) | 1.20'' (31.0) | 3.00'' (76.2) | 3.25'' (82.6) |
| BR-350 | 4.45'' (113.0) | 1.58'' (40.1) | 2.28'' (57.9) | 2.98'' (75.7) | 1.40'' (36.0) | 3.50'' (88.9) | 3.50'' (88.9) |
| BR-400 | 5.63'' (143.0) | 1.75'' (44.0) | 2.60'' (66.0) | 3.40'' (86.4) | 1.65'' (42.0) | 4.00'' (101.6) | 4.00'' (101.6) |
| BR-500 | 6.25'' (158.8) | 1.90'' (48.0) | 3.17'' (80.5) | 4.25'' (107.9) | 2.35'' (60.0) | 5.00'' (127.0) | 5.00'' (127.0) |
| BR-600 | 7.75'' (196.9) | 2.20'' (56.0) | 3.60'' (91.4) | 5.10'' (129.5) | 2.90'' (74.0) | 6.00'' (152.4) | 6.00'' (152.4) |