Ply-Seal®

Technical Bulletin

PLY-SEAL® is a pre-formed, low-density, closed-cell, crossed-linked, nitrogen blown polyethylene material. **PLY-SEAL®** is used as a flexible joint seal that is waterproof and chemical resistant. **PLY-SEAL®** is compatible with construction materials and resistant to abrasion, oxidation, oils, gasoline, salt, and other materials that may come in contact with the surface. It is NYS DOT approved and listed 705.08, as well as conforms to ASTM D1056, Type 2 Class B, Grade 3.

Key Features

- Handles 100% vertical and horizontal shear of J.O.
- Weather and UV resistant – UV Inhibitor added
- Handles 30% tension and 60% compression
- Higher heat resistance than EVA foams
- Intersections and splices are field-welded
- Quick and efficient field installations
- Solvent and chemical resistance
- A monolithic waterproof system
- Not affected by extreme cold
- Hydrostatic resistant to 70'

Enhanced Bond Line Design

Polyset manufactures the **PLY-SEAL®** with grooves along the bond surface running the length of the joint. The grooves are approximately 1/8" wide by 1/8" deep and spaced between ¼ and ½ inch apart. Splicing of the seal is performed using the heat-welding method.

Uses

The product is an ideal expansion joint seal for bridges, car parks, tunnels, waste water treatment plants, interior/exterior commercial structures, and other commercial structures where a waterproof joint seal is required. **PLY-SEAL®** may also be used in sound barrier joints. The working temperature range is: -100 to + 200°F.

Installation

PLY-SEAL® is installed with **Ply-Bonder**, a 2-part epoxy, applied on both sides of the substrate and both sides of the **PLY-SEAL®**. The seal is installed under compression (see design chart). Please refer to Joint Seal Installation Instructions for proper installation procedures.

Packaging: Fabricated per project requirements

Shelf Life: Unlimited when stored inside / out of weather

Storage: Maximum storage temperature: 95°F

Physical Data (Provisional)

Property	Value	ASTM D3575
Density (Nominal)	1.8 - 2.8 pcf	Suffix W
Compressive Strength @ 25% & @ 50%	7.8 - 12.8 psi 16 - 25 psi	Suffix D
Elongation %	200 ± 15%	Suffix T
Tensile Strength	120 psi ± 15	Suffix T
Tear Strength	17 pli ± 3 pli	Suffix G
Compression Set % **22 Hr @ 50%**	9 @ 24 Hr Rcvy ± 3 (15 @ 2 Hr Rcvy) ± 3	Suffix B
Water Absorption	< 0.03 lb/ft² 3% Vol/Vol Max	Suffix L
Toxicity	ISO 10993.5	

Design Chart

Model Number	Jt. Gap (in.) @ 60°F	Rec.* Seal Size (w x d)	Movement Range (in.)
#1.00	**3/4**	1 X 1 1/2	0.4 -1.3
#1.38	**1**	1 3/8 x 2	0.5 - 1.8
#1.63	**1 1/4**	1 5/8 x 2	0.6 - 2.1
#2.00	**1 1/2**	2 x 2	0.8 - 2.6
#2.38	**1 3/4**	2 3/8 x 2	0.9 - 3.1
#2.75	**2**	2 3/4 x 2	1.1 - 3.6
#3.00	**2 1/4**	3 x 2 1/2	1.2 - 3.9
#3.25	**2 1/2**	3 1/4 x 2 1/2	1.3 - 4.2
#3.50	**2 3/4**	3 1/2 x 2 1/2	1.4 - 4.5
#4.00	**3**	4 x 3	1.6 - 5.2
#4.50	**3 1/2**	4 1/2 x 3	1.8 - 5.8
#5.00	**4**	5 x 3 1/2	2.0 - 6.5