

DURO-GUARD® EPS TYPE I

FLUTE FILLER

Description:

Duro-Guard® EPS Type I, for use as flute filler within metal retrofit roof systems, is a premium insulation consisting of a superior closed-cell, lightweight and resilient expanded polystyrene (EPS). It meets or exceeds the requirements of ASTM C 578, *Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*.

- Available in both straight and taper-cut panels to conform to metal flute configurations.
- Provides long-term thermal insulation value.
- Does not contain CFCs or HCFCs.
- Superior moisture resistance.
- 100% recyclable.
- Available in 1.0 pcf density per ASTM C 578.
- Refer to Table 2 for physical properties.

Recommended Uses:

- Flute filler **only** within metal retrofit roof systems.

Underwriters Laboratories Inc.:

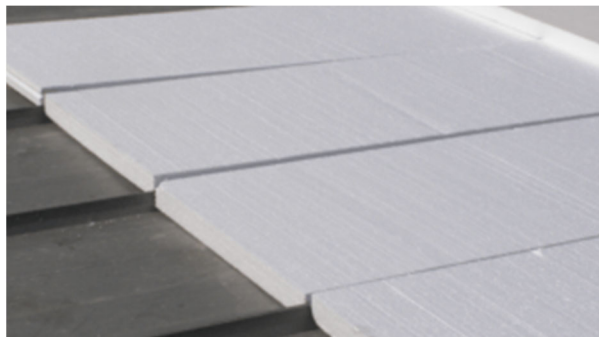
- Refer to the Duro-Last® UL Listings (TGFU.R10128) for assembly details (www.ul.com).

Factory Mutual Global:

- Refer to RoofNav® for details on FM Approved systems (www.roofnav.com).

Panel Sizes:

- Length: 4 ft. (1220 mm) or 8 ft. (2440 mm).
- Width: Custom (straight or taper-cut).
- Thickness: Up to 4 in. (102 mm).



Straight-Cut Flute Filler



Taper-Cut Flute Filler



Installation below ISO and Duro-Last membrane

Installation:

- Refer to Detail Drawing 8005 for rigid board insulation and cover board requirements above the flute filler.
- Duro-Guard fan fold **must not** be used above Duro-Guard EPS Type I. Refer to Detail Drawing 8000 for requirements when using Duro-Guard fan fold.
- Flute filler must be kept dry before, during and after installation. Install only as much flute filler as can be covered the same day with completed roofing.
- Abut flute filler edges together.

Panel Attachment:

- Flute filler may be attached to the roof deck using mechanical fasteners or insulation adhesive. It is acceptable to use these products in combination.

Mechanically Fastened

- Hold the flute filler in place with at least 1 approved Duro-Last plate/fastener.
- Only use fasteners and plates supplied by or approved by Duro-Last, Inc.

Adhered

- Insulation adhesive must be supplied by Duro-Last, Inc. Refer to the adhesive's product data sheet for application guidelines.

Acceptable products:

- Duro-Grip® insulation adhesives.

- Maximum flute filler length is 4 ft. when adhering.

Storage:

- Flute filler must be protected from open flame and kept dry at all times.
- Factory-applied packaging is intended only for protection during transit. Slit or remove the packaging to prevent accumulation of condensation.
- Store elevated (at least 3 inches) and completely covered with a weatherproof covering such as a tarpaulin.
- Do not use flute filler which is wet or damaged.

TABLE 1. TYPICAL THERMAL VALUES

Thickness*		R-Value
Inches	mm	Type I
1.00	25	3.9
1.50	38	5.8
2.00	51	7.8
2.50	64	9.7
3.00	76	11.7
3.50	89	13.6
4.00	102	15.6

TABLE 2. TYPICAL PHYSICAL PROPERTIES

Property	Test Method	Type I
Density (nominal)	ASTM C 303	1.00 pcf
R-Value (per inch) @25°F @40°F @75°F	ASTM C 518 or C 177	4.35 4.17 3.85
Compressive Strength (10% deformation)	ASTM D 1621	10 psi
Flexural Strength	ASTM C 203	25 psi
Dimensional Stability	ASTM D 2126	≤ 2.0%
Water Vapor Permeance (at 1 inch thick)	ASTM E 96	5.0 perm
Water Absorption	ASTM C 272	3.0%
Flame Spread	ASTM E 84	< 20
Smoke Developed	ASTM E 84	150 - 300

Limitations:

- Duro-Last, Inc. will not be responsible or liable for any defects or problems related to building or roof design by others, to deficiencies in construction, to dangerous conditions on the job site, or to improper storage, handling or installation by others.