

DURO-GUARD® EPS FIBERGLASS FACER

FLAT AND TAPERED PANELS

Description:

Duro-Guard® EPS Fiberglass Facer is a premium insulation consisting of a superior closed-cell, lightweight and resilient expanded polystyrene (EPS) which is factory laminated to a durable fiberglass facer. It meets or exceeds the requirements of ASTM C 578, *Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*.

- Available in both flat and tapered panels in order to meet thermal insulation needs as well as provide slope for proper roof drainage.
- May be used directly under Duro-Last® membranes. This saves labor by eliminating the need for installing a separate cover board or slip sheet.
- Provides long-term thermal insulation value.
- Does not contain CFCs or HCFCs.
- Superior moisture resistance.
- 100% recyclable.
- Type VIII, 1.25 pcf, per ASTM C 578.
- Refer to Table 3 for physical properties.

Recommended Uses:

- Mechanically attached Duro-Last roof systems.
- Duro-Bond® roof systems.
- Metal retrofit roof systems.
- Adhered Duro-Last membranes.

Underwriters Laboratories Inc:

- May achieve UL Class A fire rating on noncombustible decks without the use of a cover board. Refer to Duro-Last's UL Listings (TGFU.R10128) for assembly details (www.ul.com).

Factory Mutual Global:

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

Flat Panels:

- Typical sizes:
 - 4 ft. x 4 ft. (1220 mm x 1220 mm).
 - 4 ft. x 8 ft. (1220 mm x 2440 mm).
 - Thickness: Up to 40 inch (1016 mm).

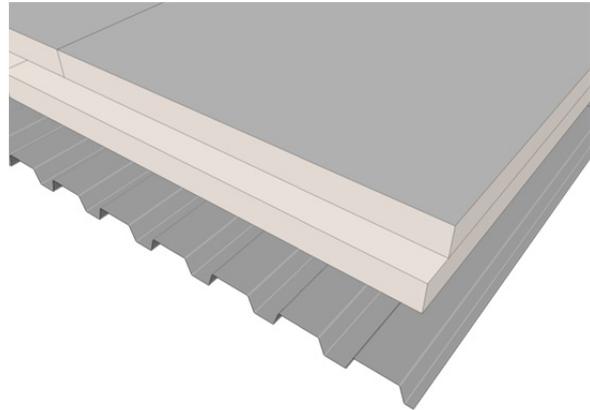


Figure 1. Duro-Guard EPS Fiberglass Facer (Top Layer)

Tapered Panels:

- Typical sizes:
 - 4 ft. x 4 ft. (1220 mm x 1220 mm).
 - 4 ft. x 8 ft. (1220 mm x 2440 mm).
 - Thicknesses: 0 to 40 inch (0 to 1016 mm).
- Precut cricket and saddle systems are available.
- Taper designs and shop drawings are available.
- Custom sizes are available.

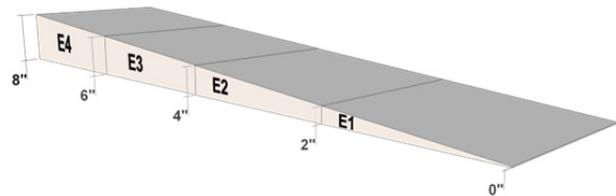


Figure 2. Duro-Guard EPS Fiberglass Facer Taper

TABLE 1. TYPICAL TAPER PANEL DIMENSIONS		
ID	SLOPE*	Thickness
A1	1/8" per 12"	1%
A2	1/8" per 12"	1%
A3	1/8" per 12"	1%
A4	1/8" per 12"	1%
C1	1/4" per 12"	2%
C2	1/4" per 12"	2%
C3	1/4" per 12"	2%
C4	1/4" per 12"	2%
E1	1/2" per 12"	4%
E2	1/2" per 12"	4%
E3	1/2" per 12"	4%
E4	1/2" per 12"	4%

EPS panels can be formed up to 40" thick.
The starting thickness of the tapered panels can be custom ordered based on project requirements.

* Contact Duro-Last for additional slope options.

Installation:

- Duro-Guard EPS Fiberglass Facer may be used directly under the Duro-Last membrane. **Ensure that “bare” EPS is never in direct contact with the membrane. Refer to the appropriate Duro-Last specification for slip sheet and cover board requirements.**
- Panels must be kept dry before, during and after installation. Install only as much insulation as can be covered the same day with completed roofing.
- The use of multiple layers of insulation with joints staggered between layers a minimum of 6 inches is recommended to eliminate thermal bridging.
- Abut panel edges together and stagger joints of adjacent panels.
- Boards must be neatly fitted to roof deck and around penetrations with no gaps greater than ¼ inch.
- Refer to the appropriate Duro-Last roof system specification and detail drawings for deck preparation and attachment requirements.
- Precautions must be taken to ensure that new concrete decks have fully hydrated and do not continue to release moisture.

Panel Attachment:

Mechanical Attachment

- When installing multiple layers (which may include insulation, cover boards and thermal barriers) it is acceptable to mechanically secure through all layers.
- Use fasteners and plates supplied by or approved by Duro-Last, Inc.

Membrane Attachment:

Approved Adhesive/Membrane Combinations

- Duro-Grip® CR-20 Membrane Adhesive.
 - Duro-Fleece®, Duro-Fleece Plus®.
- WB II Adhesive (Water-Based).
 - Duro-Last, Duro-Tuff®, Duro-Fleece, Duro-Fleece Plus, Duro-Last EV.
- SB IV Adhesive (Solvent-Based).
 - Duro-Last, Duro-Tuff, Duro-Last EV.

WB II and SB IV adhesives must not come in contact with bare EPS underneath the fiberglass facer. Do not allow adhesive to get into joints. Adhesive must be applied using a 3/8-inch nap roller. Do not pour adhesive or use any type of squeegee.

Storage:

- Insulation 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 panels which are wet or damaged.

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.

TABLE 2. TYPICAL THERMAL VALUES		
THICKNESS*		R-Value
inches	mm	TYPE VIII
1.00	25	4.2
1.50	38	6.3
2.00	51	8.4
2.50	64	10.5
3.00	76	12.6
3.50	89	14.7
4.00	102	16.8
4.50	114	18.9
5.00	127	21
5.50	140	23.1
6.00	152	25.2

* Contact Duro-Last for additional thickness options.

TABLE 3. TYPICAL PHYSICAL PROPERTIES		
Property	Test Method	Type VIII
Density (nominal)	ASTM C 303	1.25 pcf
R-Value (per inch) @25°F @40°F @75°F	ASTM C 518 or C 177	4.55 4.25 3.92
Compressive Strength (10% deformation)	ASTM D 1621	13 – 18 psi
Flexural Strength	ASTM C 203	≥ 30 psi
Dimensional Stability	ASTM D 2126	≤ 2.0%
Water Vapor Permeance	ASTM E 96	≤ 3.5 perm
Water Absorption	ASTM C 272	≤ 3.0%
Flame Spread	ASTM E 84	20
Smoke Developed	ASTM E 84	150 - 300