Technical Information Sheet

ISOGARD™ HD COMPOSITE (GRADE 1 OR GRADE 2)

Item Description HD Board	Item Description Composite Board
High Density Cover Board	Combined High Density Composite Board
Grade 1 (109 psi max.): 4' x 4' (1.22 m x 1.22 m) 4' x 8' (1.22 m x 2.44 m) **Grade 2 (139 psi max.):** 4' x 4' (1.22 m x 1.22 m) 4' x 8' (1.22 m x 2.44 m)	**Thickness Range:** 1.5" to 4" (38.1 mm to 101.6 mm)

Meets or exceeds performance requirements and recommendations of ASTM C 1289, Type IV

DESCRIPTION

Elevate ISOGAD HD Composite roof insulation boards consist of a top core layer of 1/2" (12.7 mm) high density ISOGARD HD insulation laminated to a base core layer of ISOGARD GL insulation. The composite insulation board include a coated glass facer on the top and bottom surface of the composite board. The insulation board resists hail damage and foot traffic while providing outstanding thermal performance and is suitable for use with most commercial roofing systems.

All Elevate polyiso insulations use EPA accepted blowing agents and qualify under the Federal Procurement Regulation for Recycled Material. Elevate ISOGARD HD Composite board with ISOGARD Foam Technology incorporates a HCFC-free blowing agent that does not contribute to the depletion of the ozone (ODP-free).

ISOGARD HD Composite is a mold resistant material per ASTM D3273.

METHOD OF APPLICATION

1. Insulation shall be neatly fitted to all roof penetrations, projections, and nailers. No more insulation shall be installed than can be covered with membrane and completed before the end of each day's work or before the onset of inclement weather.
2. Elevate ISOGARD HD Composite Board may be installed using Elevate Fasteners and Insulation Plates or approved Elevate Insulation Adhesives:

I.S.O. Twin Pack	I.S.O. Stick™	I.S.O. Spray™ R	Twin Jet	Twin Jet Y
Beads	Beads	Beads or Spatter	Beads or Spatter	Beads or Spatter

STORAGE

Indoors:

- Store in original packaging
- Keep dry at all times
- Store insulation bundles on a flat, stable surface and keep elevated above floor, ground, or sources of moisture. Do not store directly on grass/dirt substrates.
- Store away from heat or sources of flame

Outdoors:

Outdoor storage is approved prior to job application when the following conditions are met.

1. The bundle wrap/covering (and insulation) has remained undamaged, fully intact and covering the product without cuts, tears, rips, or removal of the wrap.
2. The bundles are secured so that wind events will not displace them. This may require additional strapping, roping, tarping, and other forms of securement to be used to keep the bundles in place.
3. The insulation must be elevated above the water line to prevent moisture infiltration into the bundles.

NOTE: If outdoor storage is to occur for more than two weeks, then tarping of the bundles is required. See additional requirements for outdoor storage below. Reference PIMA Technical Bulletin #109 Storage and Handling Recommendations for Polyiso Roof Insulation for additional information.

- Store in original packaging
- Keep dry at all times
- Store insulation bundles on a flat, stable surface and keep elevated above floor, ground, or sources of moisture. Do not store directly on grass/dirt substrates.
- Store away from heat or sources of flame.
- Cover insulation with breathable waterproof tarp.
- Tarping of the bundles is required when wet conditions exist or are forecasted.
- Secure coverings to prevent damage caused by wind.

PRECAUTIONS

- Elevate ISOGARD HD Composite is not suitable as an immediate substrate for a ballasted roof system.
- Polyiso foam will burn if exposed to a flame of sufficient heat/intensity. Keep away from heat, sparks, and open flames.
- Protect against dust that may be generated during installation.
- Refer to Safety Data Sheet (SDS) for additional information.

SPECIFICATION COMPLIANCE

ASTM C1289, Type IV

UL Classified

UL 723/ASTM E84 Flame Spread 50, Smoke Developed 160-180

FM Global Class 1 Approved

FM Global approved for Class 1 insulated steel deck construction.

Foamed Plastic classified by UL as a roof deck construction material with resistance to internal fire exposure for use in construction numbers 120 and 123 (tested to UL 1256).

Manufacturing Location: Corsicana, TX, Youngwood, PA

TYPICAL PROPERTIES

Property		ASTM Test	Typical Performance
Compressive Strength	Grade 1: per C1289: (80 psi) min. (551.58 kPa)	D1621	109 psi (751.53 kPa) max.
	Grade 2: per C1289: (110 psi min. (758.42 kPa)		139 psi (958.37 kPa) max.
	ISO Core		20 psi (≥ 827 kPa)
Density		D1622	2 pcf (32 kg/m^3)
Dimensional Stability		D2126	< 2%
Moisture Vapor Transmission		E96	< 1.0 Perm (<5735 ng/(Pa●s●m^2))
Water Absorption		C209	< 1%
Service Temperature		---	-100 to 250 °F (-73 to 121 °C)

PRODUCT DATA: AVAILABLE SIZES: 4' X 4' (1.22 M X 1.22 M), 4' X 8' (1.22 M X 2.44 M)

Thickness** inch/mm	LTTR* (R-Value) in ft^2 h °F	Max Flute Span inch/mm	Weight per 4'x 4' (1.2 m x 1.2 m) board	Total Recycled Content %	Post Industrial %	Post Consumer %
1.50 (38.1)	8.2	4.375 (111.1)	9.9 lb (4.5 kg)	44	15	29
2.00 (50.8)	11.1	4.375 (111.1)	11.2 lb (5 kg)	39	15	24
2.50 (63.5)	13.9	4.375 (111.1)	12.5 lb (5.7 kg)	35	15	18
3.00 (176.2)	16.9	4.375 (111.1)	13.7 lb (6.2 kg)	32	15	17
3.50 (88.9)	19.9	4.375 (111.1)	15 lb (6.8 kg)	30	15	15
4.00 (101.6)	23.0	4.500 (114.3)	16.3 lb (7.4 kg)	29	15	14

**Long Term Thermal Resistance (LTTR) in accordance with ASTM C 1303-11 and CAN/ULC-S770-09*
***Other thicknesses available upon request*

ACCEPTABLE SUBSTRATES

Property	NOTE
Structural Concrete, 3000 psi (new & existing)	Please consult Membrane Design Guides online at www.elevatecommercialbp.com to review specific information regarding fastener types appropriate for the type of deck and insulation in use.
Steel, min. 22 gauge	
Lightweight Concrete*	
Plywood and OSB, min. ½"	
Gypsum, min. 2"	
NOT ACCEPTABLE	Do not use hot asphalt to adhere membrane to the ISOGARD HD surface of ISOGARD HD Composite. Elevate ISOGARD HD Composite is not suitable as an immediate substrate for a ballasted roof system.

Please contact Elevate Technical Services at 800-428-4511 for further information.