

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)	Thickness Range: 1.5" to 4" (38.1 mm to 101.6 mm)
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)	

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

Description

Elevate ISOGARD HD Composite roof insulation consists of a closed cell polyiso foam core laminated to 1/2" (12.7 mm) high density ISOGARD HD board, and coated glass facers. It 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

- 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.
- 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. Spray™ R
 - I.S.O. FIX™ II
 - Twin Jet
 - I.S.O. Stick™

Storage

- Keep insulation dry at all times.
- Elevate insulation above the deck or ground.
- Cover insulation with waterproof tarps.

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	D1621	Grade 1: per C1289: (80 psi) min. (551.58 kPa)
		Grade 2: per C1289: (110 psi) min. (758.42 kPa)
		ISO Core
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 (76.2)	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

Acceptable Substrates	
Property	NOTE
Structural Concrete, 3000 psi (new & existing)	Please consult Membrane Design Guides online at www.holcimelevate.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. 1/2"	
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 Holcim Technical Services at 800-428-4511 for further information.

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