

# H-SHIELD HD

1/2" High-Density Polyisocyanurate Cover Board For New and Retrofit Low-slope and Steel Deck Roofing Applications



**H-Shield HD**  
Manufactured by Hunter Panels

## PRODUCT DESCRIPTION

H-Shield HD is a 1/2" thick high-density polyiso insulation panel specifically designed for use as a cover board. It is manufactured on-line to a premium performance coated glass facer on both sides (CGF). H-Shield HD delivers an R-value of 2.5 in its 1/2" profile; significantly higher than roof cover boards made with other materials such as wood fiber or gypsum.

## PREMIUM PERFORMANCE ATTRIBUTES

- Bearing plates not required
- Manufactured with NexGen Chemistry: Contains no CFCs, HCFCs, is Zero ODP, EPA Compliant, and has virtually no GWP
- 4 lbs/pcf high density foam core provides enhanced physical properties
- Lightweight (11 lbs per 4'x8' panel); easy to cut, handle and install
- Sturdy constitution and durability protects the roof system from effects of hail, roof top construction traffic and other potentially damaging elements
- Achieves a UL 790 Class A combustible deck assembly rating at 1/2" thickness without the use of a fire-rated slip sheet or the presence of a fire barrier. Insulation joints must be staggered a minimum of 12" from the combustible deck joints. Maximum roof slope = 1:12
- Passed (10) ASTM D 3273 Resistance to Mold Test
- Hail Rating: SH-1

## APPLICATIONS

- Constructions requiring FM Class 1 and UL Class A ratings
- Suitable for use with approved fasteners and plates, also cold applied and low-rise adhesives

## PANEL CHARACTERISTICS

- Available in ASTM C 1289 Type II, Class 4, Grade 1 (109 psi max)
- Available in 1/2" 4'x8' (1220mm x 2440mm) and 4'x4' (1220mm x 1220mm) panels
- Constructions requiring UL Class A ratings

## H-SHIELD HD THERMAL VALUES

THICKNESS (INCHES)	THICKNESS(MM)	R-VALUE*
0.5	13	2.5
*Tested in accordance with ASTM C518		

## H-SHIELD HD PACKAGING AND WEIGHTS

SIZE	LTTR	4X8 PCS	4X8 LBS/PC	4X8 LBS/PAL	4X4 PCS	4X4 LBS/PC	4X4 LBS/PAL	LBS/SF
0.5	2.5	45 (1/2 stack)	11.0	495	96	5.5	528	0.343

## CODES AND COMPLIANCES

- ASTM C 1289 Type II, Class 4, Grade 1 (109 psi max)
- UL Classified 790
- UL Class A
- ASTM E108
- FM Approved – consult RoofNav for specific assemblies
- FM Approved 1-75
- Miami Dade County Product Control Approved
- State of Florida Product Approval No. FL 5968
- California Code of Regulations, Title 24, Insulation Quality Standard License #TI-1420

## UL CLASSIFIED FOR USE IN CANADA

- Refer to UL Directory of Products Certified for Canada for more details
- UL Certified for Canada, CAN/ULC-S126, CAN/ULC- S107
- CAN/ULC-S704 Type 3 Class 2

## POTENTIAL LEED CREDITS FOR POLYISO USE

### Energy and Atmosphere

- Optimize Energy Performance

### Materials & Resources

- Building Life-Cycle Impact Reduction
- Environment Product Declaration
- Material Reuse
- 9% Pre-consumer Recycled Content
- Construction and Demolition Waste Management

### Indoor Environmental Quality

- Thermal Comfort

## THE USE OF METAL ROOFING UNDERLAYMENTS

PAC-CLAD strongly suggests the use of Carlisle's WIP 300HT on all warranted projects.

## VAPOR RETARDERS

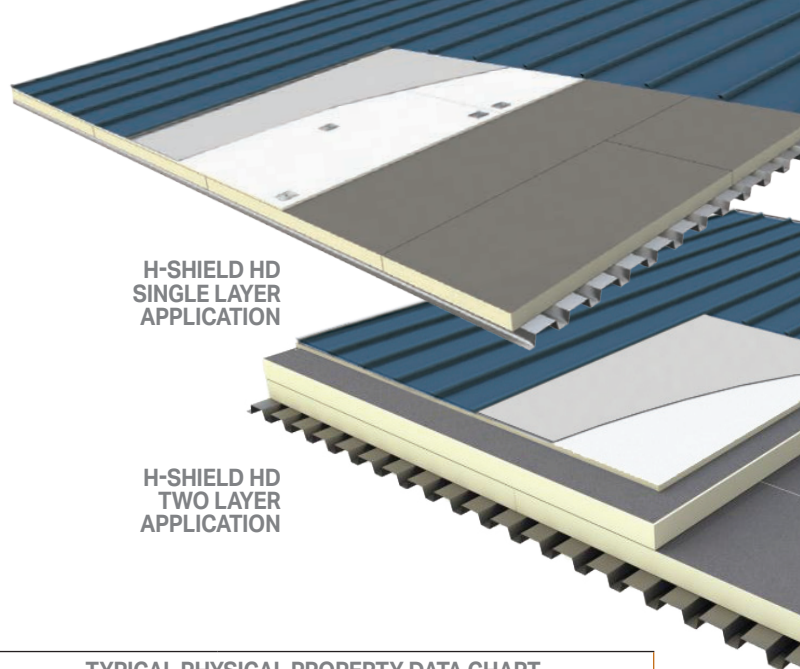
In building construction, vapor retarders are used to inhibit or block the passage of moisture into roofing assemblies. Vapor barriers also serve as air barriers to limit the movement of moisture-laden air from the interior to the exterior. This is especially important during the construction phase where excessive moisture drive is present. To determine whether a vapor retarder is necessary it is recommended that calculations on the building's interior relative humidity, interior temperature conditions and outside temperature fluctuations during the various seasons be performed prior to the completion of the design. Excessive moisture migration can cause unwanted condensation that will potentially damage the system or infiltrate the occupied space. PAC-CLAD strongly suggests the use of a vapor retarder with a perm value of 0.5 or less on all projects except in extreme cooling conditions. Consult a licensed design professional, architect or engineer to establish whether or not a vapor retarder is necessary and to specify its type and location within the assembly. This criteria varies with geographical location and is therefore specific to each project.

## FASTENING GUIDELINES

PAC-CLAD requires the use of a SIP SD Panel Fastener for steel deck applications, the SIP WD for plywood deck applications, and SIP HD for heavy-duty steel decks. Additional information on fasteners and fastening patterns are available on pac-clad.com.

FASTENING REQUIREMENTS*				
FM RATING	0.5" THICKNESS	#OF FASTENERS PER 4X8		
		FIELD	PERIMETER	CORNER
1-75	0.5	12	16	24
1-90	0.5	16	*	*

\* Contact your membrane manufacturer for their specific fastening requirements



H-SHIELD HD SINGLE LAYER APPLICATION

H-SHIELD HD TWO LAYER APPLICATION

TYPICAL PHYSICAL PROPERTY DATA CHART  
PER ASTM C 1289 – POLYISO FOAM CORE ONLY

PROPERTY	TEST METHOD	VALUE
Compressive Strength	ASTM D 1621	Grade 1 (109 psi max)
Dimensional Stability	ASTM D 2126	< 0.5% linear change (7 days)
Water Absorption	ASTM C 209	< 1% volume
Flame Spread*	ASTM E 84	< 75
Smoke Developed*	ASTM E 84	< 450
Service Temperature	-	260° F or less
Recycle Content		9% - pre-consumer

\*Meets the requirements of the IBC code. For specific Flame Spread or Smoke Developed Ratings please contact the Hunter Panels Technical Department

## WARNINGS AND LIMITATIONS

Insulation must be protected from open flame and kept dry at all times. Install only as much insulation as can be covered the same day by completed roof covering material. PAC-CLAD will not be responsible for specific building and roof design by others, for deficiencies in construction or workmanship, for dangerous conditions on the job site or for improper storage and handling. Technical specifications shown in this literature are intended to be used as general guidelines only and are subject to change without notice. For more information refer to the Storage and Handling Technical Bulletin at pac-clad.com, or refer to PIMA Technical Bulletin No. 109: Storage & Handling Recommendations for Polyiso Roof Insulation at www.polyiso.org.



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