



FLEX HDCB II

DESCRIPTION

Closed-cell polyisocyanurate (polyiso) foam core integrally bonded to inorganic coated glass facers (CGF) on both sides. Available in 0.5" thick 4ft x 8ft (1220mm x 2440mm) and 0.5" thick 4ft x 4ft (1220mm x 1220mm) panels. Manufactured in accordance with **ASTM C1289, Type II, Class 4, Grade 1 (80 psi (551 kPa) minimum, up to 110 psi (758 kPa) compressive strength) and CAN/ULC 704.1, Type 4, Class 3.**

APPLICATIONS

Manufactured and tested for use in new and re-roofing applications. Flex™ HDCB II is used in mechanically attached single-ply, fully adhered single-ply, and self-adhered "peel & stick" roofing systems. These roofing systems depend on proper installation for successful performance. Refer to roof cover manufacturer, FM Approvals® RoofNav and UL Product iQ® for additional application details.

INSTALLATION

Flex HDCB II shall be kept dry before, during, and after installation. This product will burn if exposed to an ignition source of sufficient heat and intensity. Do not apply flame directly to Flex HDCB II insulation. Refer to product packaging and [PIMA Technical Bulletin #109](#) for storage and handling recommendations. To minimize the effect of thermal bridging, and the impact of moisture/airflow into the roof system, Flex Membrane Inc strongly recommends Flex HDCB II to be installed in multiple layers. Please refer to our website for more information. Typical field fastening requirements can be obtained from Flex Membrane Inc and/or, FM Approvals Roof Nav, or FM Global Property Loss Prevention Data Sheet 1-29.

Prior to installation, Flex Membrane Inc recommends, as applicable, you consult with your local building code official(s), contract documents, design professional, and all other relevant parties to ensure appropriate compliance.

CODE COMPLIANCE

- **ASTM C1289, Type II, Class 4, Grade 1**
- **CAN/ULC 704.1, Type 4, Class 3**
- **UL 1256 Classification** Construction No. 120, 123 & 292
- **UL 790 (ASTM E108)** Roofing Systems Classification
- **UL 263 (ASTM E119)** Fire Resistance Classification
- **FM 4450/4470** Refer to FM Approvals® RoofNav for Specific System Details
- **FM 4473 Rated SH-1** for Severe Hail
- **UL Class B** Over Combustible Decks with UL Classified Membranes
- **IBC Chapter 26 & NBC** Sections on Foam Insulation

SUSTAINABILITY

- Contains no CFCs, HCFCs, or HFCs
- Zero Ozone Depletion Potential (ODP)
- Negligible Global Warming Potential (GWP)
- Contributes to LEED credits

PHYSICAL PROPERTIES

FLEX HDCB II MEETS OR EXCEEDS THE FOLLOWING PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	ASTM C1289 OR CAN/ULC 704.1 (MIN REQUIREMENTS)
DIMENSIONAL STABILITY (LENGTH AND WIDTH)	ASTM D2126	<0.5%
COMPRESSIVE STRENGTH	ASTM D1621	*Grade 1
WATER ABSORPTION	ASTM C209	<4.0%
	ASTM C1763	<4.0%
	ASTM D2842	<3.5%
WATER VAPOR TRANSMISSION	ASTM E96	<1.5 perm (85.5ng/(Pa*s*m ²))
FLAME SPREAD	ASTM E84/UL723	**<75
SMOKE DEVELOPMENT	ASTM E84/UL723	**<450
TENSILE STRENGTH	ASTM D1623	>2000 psf (95 kPa)
SERVICE TEMPERATURE	-	-100° to +250°F

* 80 PSI (551 kPa) minimum, up to 110 PSI (758 kPa)

**Numerical ratings are not intended to reflect performance under actual fire conditions. Flame spread index of ≤75 and smoke development ≤450 meet code requirements for foam plastic roof insulation. Physical properties listed above are presented as typical average values as determined by referenced ASTM test methods and are subject to nominal manufacturing variations.



THERMAL DATA

THICKNESS	THERMAL RESISTANCE		PIECES PER UNIT	SQUARE FEET PER UNIT		TRUCKLOAD QUANTITIES (SQUARES)	AVERAGE WEIGHT (LB/SF)	RECYCLED CONTENT		
	AVERAGE ¹ LTTR VALUE	² RSI		4x8	4x4			POST CONSUMER	PRE CONSUMER	TOTAL
0.50"	2.5	0.44	42	1344	672	645.12	0.50	-	7.4%	7.4%

¹Conditioned thermal values were determined by ASTM Test Method C 518 at 75° mean temperature. Test specimens were conditioned in accordance with procedures outlined in ASTM C1289, Section 11.1.2.1. Test samples were third-party selected and tested by an accredited material testing laboratory.

²RSI is the metric expression of R-value (m2 • K/W).

**To minimize the effects of thermal bridging, and the impact of moisture/airflow into the roof system, Flex Membrane Inc strongly recommends the Flex HDCB II insulation assembly be installed in multiple layers.*

WARRANTY

Flex HDCB II is backed by a Limited 20-Year Thermal Warranty. For complete terms and conditions, visit our website.

Other than the aforementioned representations and descriptions, Flex Membrane International Corporation (hereafter, "Seller") makes no other representations or warranties as to the insulation sold herein. The Seller disclaims all other warranties, express or implied, including the warranty of merchantability and the warranty of fitness for a particular purpose. Seller does, however, have a limited warranty as to the LTTR-Value of the insulation, the terms of which are available upon request from the Seller. Seller shall not be liable for any incidental or consequential damages including but not limited to the cost of installation, removal, repair or replacement of this product. Buyer's remedies shall be limited exclusively to, at Seller's option, the repayment of the purchase price or resupply of product manufactured by Flex Membrane Inc in a quantity equal to that of the nonconforming product. Flex distributors, agents, salespersons or other independent representatives have no authority to waive or alter the above limitation of liability and remedies.

