



PRODUCT DESCRIPTION

ENbase is a rigid roof insulation composite panel composed of a closed-cell polyisocyanurate foam core bonded during the manufacturing process to a fiber-reinforced facer on one side and either 7/16" or 5/8" oriented strand board (OSB) on the other, or manufactured off-line using an FM-approved glueing adhesive.

Features and Benefits

- Manufactured with a CFC free EPA compliant blowing agent with zero ODP
- A superior combination of high insulating properties and a nailable surface
- Suitable for new construction and re-roofing on slopes 3:12 or greater
- Incorporates APA-TECO rated Exposure 1 Oriented Strand Board
- Manufactured online with a routed edge to allow for expansion of the OSB
- Also available as a non-routed panel for standing seam metal
- Is available bonded to CDX plywood (various sizes), manufactured in an offline process
- Available with FSC-Certified OSB or plywood upon request

Panel Characteristics

- Available size is 47½" x 95½" when routed online in thickness of 1½" (38 mm) to 4½" (115 mm)
- Available in 4'x8' when non-routed in thickness of 1½" (38 mm) to 4½" (115 mm)
- ASTM C1289-06, Type V

Applications

- ENbase with 7/16" OSB is suitable for use with all shingle types, synthetic slate, tile and standing-seam metal roof systems.
- ENbase with 5/8" OSB is suitable for use with tile and slate roof systems.

ENBASE THERMAL VALUES

THICKNESS (INCHES/MM)	LTRR R VALUE*	FLUTE SPANABILITY
1.5/38	6.6	4 3/8"
2.0/51	9.6	4 3/8"
2.5/64	12.7	4 3/8"
3.0/76	15.9	4 3/8"
3.5/86	19.1	4 3/8"
3.7/89	20.4	4 3/8"
3.8/96	21.0	4 3/8"
4.0/102	22.3	4 3/8"
4.5/115	25.6	4 3/8"

*Long Term Thermal Resistance Foam Core Values are based on ASTM C1289-06 and CAN/ULC S770 which provides for a 15-year time weighted average. All PIMA members have adopted this advanced standard for R-value measurement as of 1/1/03. R Means resistance to heat flow. The higher the R-Value, the greater the insulating power. To get the marked R-Value, it is essential that this insulation be installed properly. If you do it yourself, get instructions and follow them carefully. Instructions do not come with this package.

INSTALLATIONS

ENbase is installed, wood side up, over metal, wood or structural roof decks. SIP/NB Panel Fasteners are required to secure the ENbase to the roof deck. Wood blocking, if necessary, should be equal in thickness to the ENbase, and is installed along the eaves and rake edges of the roof. The roofing system is then installed according to the manufacturer's recommendations.

FASTENING GUIDELINES

Carlisle Residential requires the use of the Hunter Panels SIP/SD Panel Fastener for steel deck applications and the SIP/WD for wood deck applications. See ENbase Fastening Literature for recommended fastening patterns.

VAPOR RETARDERS

The incorporation of a vapor barrier or retarder within the roofing assembly is highly recommended when the project is located in Zones 4-8 as determined by the International Code Council Dept. of Energy NW National Lab of the United States (map is located on www.polyiso.org). Consult a licensed design professional, architect or engineer to establish whether or not a vapor barrier is necessary and to specify its type and location. This is especially important during the construction phase when excessive moisture drive is present. Carlisle Residential recommends that a dew point calculation be performed prior to the installation of any product. This calculation is based on the building's interior relative humidity, interior temperature conditions and outside temperature. Excessive moisture migration and temperature fluctuations during construction will potentially damage the system and cause unwanted condensation and aesthetic anomalies.

ENBASE CODES AND COMPLIANCES

Federal Specifications:

- ASTM C1289-06, Type V
- National Building Code (1998) Section 2603 Building Officials and Code Administration International, Inc.

NOTE: Please be aware the Federal Specification HH-I-1972/GEN has been replaced

Underwriters Laboratories, Inc.:

- Component of Class A Roof Systems
- TGDY. R20624 Shingle Deck Accessory; ENbase roof insulation is classified for use with any Class A, B, or C asphalt glass mat or asphalt organic shingles, metal or tile roof coverings.

FM Approvals:

- FM 4450 (Foam Core only)

(Subject to the conditions of approval described in the current Factory Mutual Approval Guide and Supplements)

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. Do not expose ENbase to moisture. If exposed swelling, delamination and deterioration may occur, Carlisle Residential will not be responsible for specific building and roof design by others, for deficiencies in construction or workmanship, for dangerous conditions on the jobsite or for improper storage or handling. Technical specifications shown in this literature are intended to be used as general guidelines only and are subject to change without notice. Call Carlisle Residential for more specific details, or refer to PIMA Technical Bulletin No. 109: Storage & Handling Recommendations for Polyiso Roof Insulation.

TYPICAL PHYSICAL PROPERTY DATA CHART POLYISO FOAM CORE ONLY PROPERTY TEST METHOD VALUE

PROPERTY	TEST METHOD	VALUE
Compressive Strength	ASTM D1621 ASTM C1289-06	20 psi minimum (138kPa, Grade 2)
Dimensional Stability	ASTM D2126	2 % linear change (7 days)
Moisture Vapor Transmission	ASTM E96	< 1 perm (57.5ng/(Pa•s•m ²))
Water Absorption	ASTM C209	<1% volume
Flame Spread (foam core)	ASTM E84	<50
Smoke Developed	ASTM E84	<450
Service Temperature		-100° to 250° F (-73°C to 122°C)

OTHER PRODUCTS BY CARLISLE RESIDENTIAL

- WIP® 100, 200, 300HT, 400, 401LT, 403HR
- EZRoof®
- EcoStar® Majestic Slate™ Tiles
- EcoStar Seneca Cedar Shake Tiles™
- EcoStar Aqua Guard
- EcoStar EcoVent™
- EcoStar Glacier Guard™
- EcoStar Snow Guards
- EcoStar Fasteners™
- EcoStar Tile Tape



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