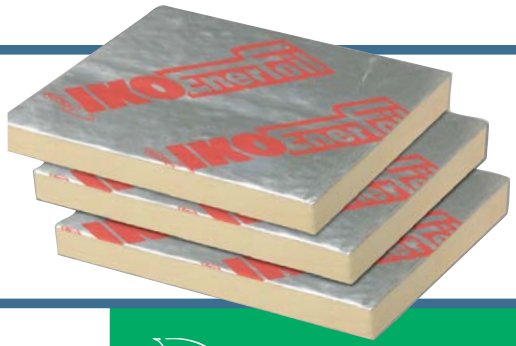
IKO Enerfoil

Setting the Standard

Polyisocyanurate Insulation Sheathing



HCFC-free

Enerfoil by IKO is a rigid polyisocyanurate insulation sheathing with a foil facer laminated on the top and bottom side. Manufactured at IKO's state-of-the-art ISO 9001-2008 registered facility, **Enerfoil** is a sheathing that:

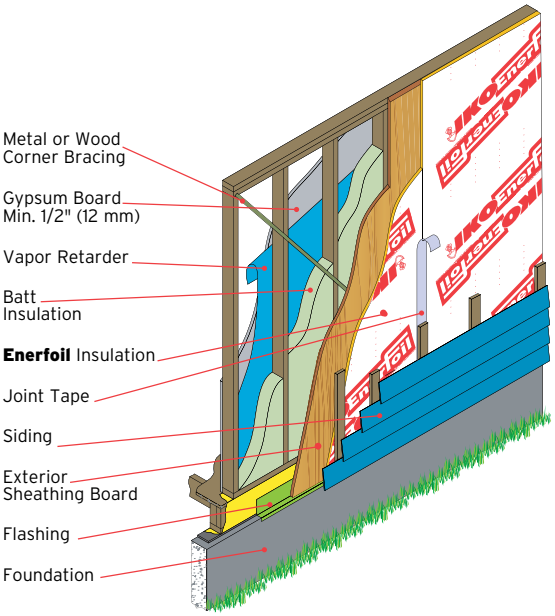
- Provides high thermal resistance of R6.2 per inch (RSI 1.08 per 25 mm) for improved energy efficient performance of walls.
- Helps decrease the cost of construction. Designers can reduce the overall footprint of their buildings, as a smaller thickness of **Enerfoil** achieves the same R-value (RSI) of other types of insulation.
- Is environmentally friendly. No ozone-depleting HCFC's are used in the manufacture of **Enerfoil**, making it an ideal "Green" product. **Enerfoil**'s Energy Star® certification means that it clearly contributes to reducing energy consumption.
- Is user-friendly. Laminated facers on both sides of the sheathing provide moderate abuse-resistance on the jobsite. **Enerfoil** is lightweight & easy to cut, thus reducing labor costs on site. Stud indicators improve accuracy of installation.
- Provides versatility. Foil facings provide the long-term moisture resistance necessary for cavity wall applications. **Enerfoil**'s facings are also compatible with solvent-based materials, which can attack and compromise the performance of other thermoplastic insulations.
- Has a uniform thickness for consistently maintaining air space requirements in cavity wall applications.
- Is available in 4' x 8' boards with the following thicknesses: 1/2" (12 mm), 3/4" (19 mm), 1" (25 mm), 1-1/2" (38 mm), 2" (50 mm), 2-1/2" (63 mm), 3" (75 mm), and 3.5" (89 mm). Available in 4' x 9' boards with the following thicknesses: 3/4" (19 mm) and 1" (25 mm).

Applications

Consult your local Building Code for requirements pertaining to air barriers, vapor retarders, joint treatment and strapping. **Note:** In order to reduce exposure to the elements, it is important to apply the exterior veneer over **Enerfoil** as soon as practical, following its installation. If it will be left exposed for an extended period of time, keep a protective covering over the sheathing.

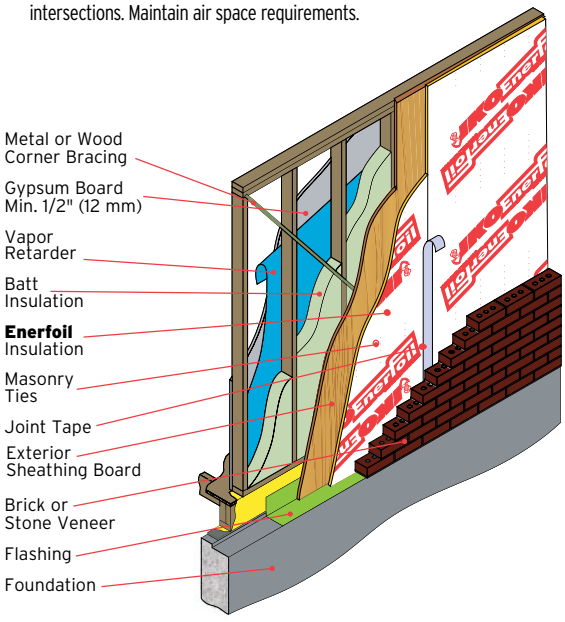
Frame Construction Siding

For wood framing, corner bracing is recommended at corners and around large openings. **Enerfoil** is fastened to the studs using washered nails. Ensure that the fastener penetrates a minimum of 3/4" (19 mm) into the framing. Steel stud walls have **Enerfoil** fastened to the studs using mechanical fasteners with metal washers. Sheathing is installed with fasteners spaced 2" (300 mm) o.c. in the flat, 8" (203 mm) o.c. around the perimeter.



Frame Construction Brick Veneer

For wood framing **Enerfoil** is fastened to the studs using washered nails. Ensure that the fastener penetrates a minimum of 3/4" (19 mm) into the framing. Steel stud walls have **Enerfoil** fastened to the studs using mechanical fasteners with metal washers. Sheathing is installed with fasteners spaced 12" (300 mm) o.c. in the flat, 8" (203 mm) o.c. around the perimeter. Approved masonry ties must be spaced and installed as per masonry requirements. Install low expanding foam to create tight seal at small [<4 sq. in (102 sq. mm)] penetrations through the exterior envelope and irregularities at wall intersections. Maintain air space requirements.



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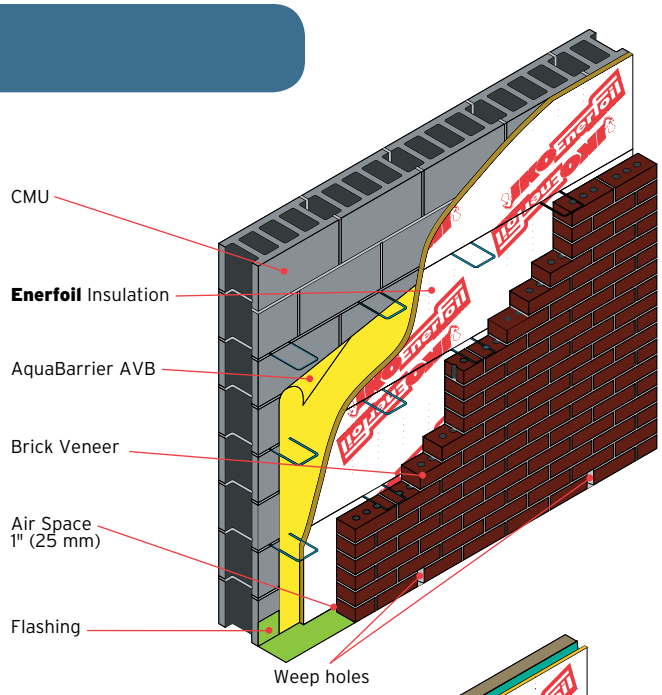
Note: Proper structural requirements can be met by bracing or exterior sheathing.

†USA ONLY

Applications Cont'd

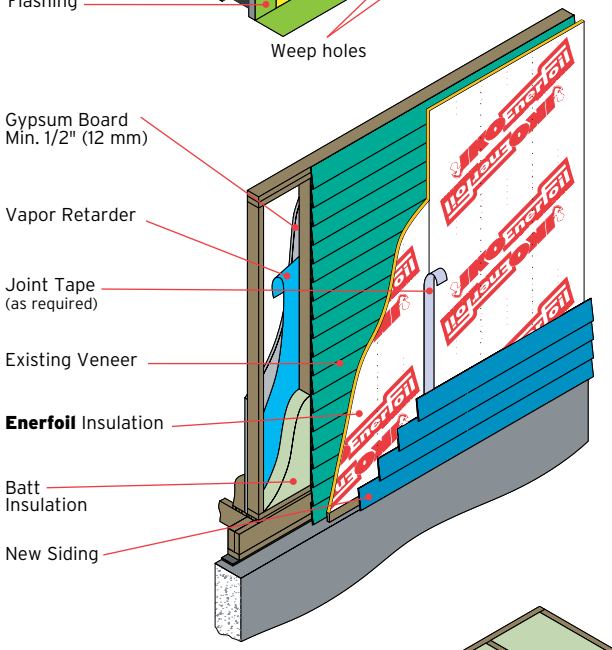
Block Wall Construction

Enerfoil is attached against block wall using construction-grade adhesive compatible with air/vapor barrier. Boards are cut to friction fit between Building Code approved masonry ties.



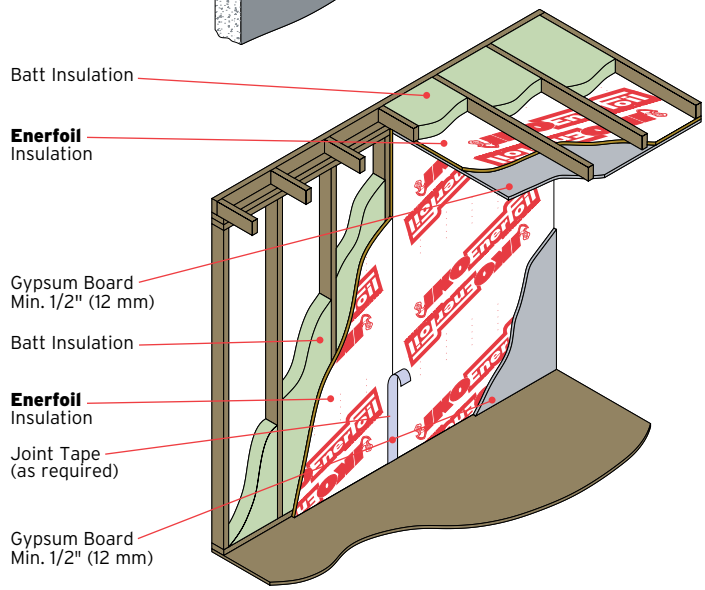
Retrofit Application

Corrective action should be taken where evidence of moisture-related problems exist. This may include the replacement or repair of framing members, increased ventilation or installation of a vapor retarder. Install **Enerfoil** vertically and butt all edges. Secure boards with washered fasteners and penetrate framing members a minimum of 3/4" (19 mm). Install new siding according to manufacturer's instructions.



Interior Ceiling & Wall Applications

When used in interior ceiling and wall applications, **Enerfoil** must be protected from the building interior by a minimum 1/2" (12 mm) gypsum board. The use of an interior vapor retarder may not be required if the seams are taped. Consult your local Building Code. For walls, install **Enerfoil** vertically with edges in direct contact with the framing members. Install using washered fasteners spaced 12" (300 mm) on center and penetrating the framing a minimum of 3/4" (19 mm). A minimum 1/2" (12 mm) gypsum board is to be installed over the **Enerfoil**.



Typical Physical Properties

Characteristic	Units	Typical Value	Specification	Test Method	Standard Limits
Length Tolerance	in. (mm)	± 0.16 (± 4)	CAN/ULC-S704	ASTM C303	+ 0.25 (+ 6) – 0.16 (- 4)
Width Tolerance	in. (mm)	± 0.08 (± 2)	CAN/ULC-S704	ASTM C303	+ 0.16 (+ 4) – 0.08 (- 2)
Dimensional Stability (MD/XD) At 70°C, 97% R.H.	%	< 2	CAN/ULC-S704	ASTM D2126	MAX: ± 2
Water Vapor Permeance	ng/Pa•s•m^2	< 15	CAN/ULC-S704	ASTM E96	=/< 15
Water Absorption	% by Vol.	<1.0	CAN/ULC-S704	ASTM D2842	MAX: 3.5
Compressive Strength	kPa (psi)	124 (18)	CAN/ULC-S704	ASTM D1621	MIN: 110 (16)
Thermal Resistance Value* Thickness: 0.5 in. (12 mm) 0.75 in. (19 mm) 1.0 in. (25 mm) 1.5 in. (38 mm) 2.0 in. (50 mm) 2.5 in. (63 mm) 3.0 in. (75 mm) 3.5 in. (89 mm)	Btu•hr•ft^2•°F (RSI)	3.1 (0.54) 4.5 (0.81) 6.2 (1.08) 9.3 (1.62) 12.4 (2.16) 15.5 (2.70) 18.6 (3.24) 21.7 (3.78)	CAN/ULC-S704	CAN/ULC-S770	-
Service Temperature	°F (°C)	– 40 to 212 (– 40 to 100)	-	-	-
Flame Spread Index Smoke Density Index	-	< 75 < 450	-	ASTM E84	-
Flame Spread Index (Canada) Smoke Density Index (Canada)	-	< 500 < 55	-	S102	-

*Stated thermal resistance values are based upon conditioning requirements and test methodology found in ULC S-704 and ASTM C518 for foil-faced polyisocyanurate insulation. As a conservative estimate for long-term thermal resistance design value, R6.2 (RSI 1.08) per inch thickness is typically used. Since R-value claims among various polyisocyanurate brands may vary, it is best to consult independently verified test data such as that found in Canadian Construction Materials Centre (CCMC) Evaluation reports. Please see IKO's CCMC Evaluation Report #13188-L (as well as CCMC Report #'s 12422-R and 13104-L) for more information.

Storage

- It is recommended that **Enerfoil** be stored indoors.
- When outdoor storage of insulation is unavoidable, the insulation shall be stacked on pallets a minimum of four inches (4") (102 mm) above ground level and covered with a waterproof tarp. The insulation manufacturer's packaging is not considered waterproof and shall be slit, as recommended by the manufacturer, to reduce condensation inside the packaging.
- Keep on a level surface, elevated at least 4" (102 mm) above ground.

Note: **Enerfoil** should not be used below grade where it is subject to water infiltration.

Codes & Compliances

ASTM 1289	Type 1, Class 1
CAN/ULC S704-03	Type 1, Class 1
ASTM E84	Flame Spread Index <75 Smoke Density Index < 450
S102	Flame Spread Index (Canada) < 500 Smoke Density Index (Canada) < 55
CCMC#	13188-L

Thank you for considering IKO Premium Insulation products. For additional information on IKO's full line of superior Building Envelope, Roofing and Waterproofing products please call:
1-855-IKO-ROOF (1-855-456-7663) or visit our web site at: www.iko.com

Member of:

ISO-9001-2008 Registered Company

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Note: The information in this literature is subject to change without notice. All values shown are approximate.
IKO assumes no responsibility for errors that may appear in this literature.
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