Enerfoil®

BUILDING ENVELOPE INSULATION

IKO.COM/COMM

- Multipurpose Sheathing
- Cost-Effective
- Non-Permeable
- Controls Sound
- Component of the 4-IN-1 WRB System

An energy efficient, non-permeable, noise reducing, reinforced wall insulation board with outstanding R-value.

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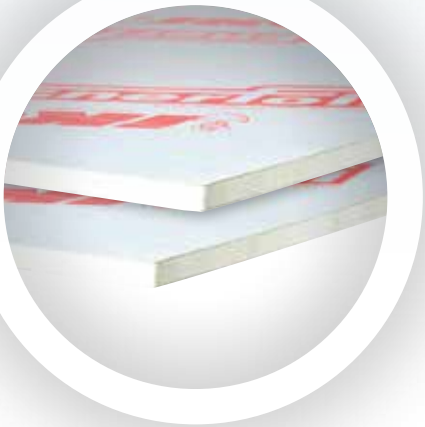
A non-permeable, nonstructural rigid polyisocyanurate insulation sheathing board with high thermal resistance properties. Constructed from closed cell polyisocyanurate foam core, which is bonded on each side to an aluminum foil facer.



Performance as a Sheathing

- **Polyiso has the highest R-value per inch** of any rigid foam board insulation. Increased thermal resistance improves wall energy efficiency performance.
- **Reduces initial construction costs.** The higher thermal values per inch of Enerfoil insulation sheathing means that it requires less space than less efficient insulation to deliver the same level of performance.
- **Controls sound.** Enerfoil reduces noise, adding quiet comfort to the building enclosure. Enerfoil has been tested to deliver world class STC qualities.
- **Non-emissive odour tested.** Enerfoil has passed testing for odour, assuring building occupants that industry standards are met.
- **User-friendly.** Laminated foil facers on both sides of the sheathing provide moderate abuse-resistance on the job site. Enerfoil is lightweight and easy to cut, thus reducing labour costs on-site. Stud and fastener line indicators improve accuracy of installation.
- **Provides versatility.** Foil facers provide the long-term moisture resistance necessary for various wall applications. Enerfoil's facers are also compatible with most solvent-based materials.
- **Has a uniform thickness** for consistently maintaining air space requirements in cavity wall applications.
- **Available in 4 ft x 8 ft boards with the following thicknesses:** 12 mm (0.5 in), 16 mm (0.625 in), 18 mm (0.75 in), 25 mm (1 in), 38 mm (1.5 in), 50 mm (2 in), 64 mm (2.5 in), 75 mm (3 in), 89 mm (3.5 in) and 100 mm (4 in).
- **Available in 4 ft x 9 ft boards with the following thicknesses:** 18 mm (0.75 in), 25 mm (1 in) and 38 mm (1.5 in). Other sizes are available upon request as a special order.
- **Can be precut** at our factory to the size you need with IKO AccuCut™ Service.[1]
- **Enerfoil can work as a 4-IN-1 Insulated Weather-Resistive Barrier (WRB) System for exterior walls.** When Enerfoil is detailed with IKO AquaBarrier™ Tapes (which are primed with IKO S.A.M. Adhesive or IKO S.A.M. Adhesive LVC), the Enerfoil System can be a code-compliant non-permable 4-in-1 WRB assembly for exterior walls, thus providing four major design beneifts - insulation, air barrier, weather resistive vapour barrier and sound reduction all at once. This eliminates the need for a building wrap and a vapour barrier.

Storage

- It is recommended that Enerfoil be stored indoors.
- When outdoor storage of insulation is unavoidable, the insulation must be stacked on pallets a minimum of 50 mm (2 in) 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.

Codes & Compliances

ASTM E84		
Flame Spread Index < 75 Smoke Density Index < 450		
CAN/ULC S102		
Flame Spread Index (Canada) < 55		
ASTM C1289 CAN/ULC S704	CCMC#	CAN/ULC S742
Type 1 Class 1	13188-L	Class A1

[1] **Please refer to "IKO AccuCut™ Guide" for more information on this service.**

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APPLICATIONS

Consult your local building code for requirements pertaining to air barriers, vapour retarders, joint treatment and strapping. Use and application of this product must be in accordance with all local, provincial and national building code requirements.

No special personal protective equipment is required to install Enerfoil; but good work practices and local safety officials may dictate the use of gloves, safety glasses and other safety equipment.

Enerfoil should not be used on the exterior below grade where it is subject to water infiltration. See IKO Enerfoil & Ener-Air and IKO AquaBarrier Application Guides at: **IKO.COM/COMM** for further application details.

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 left exposed for more than 30 days, keep a protective covering over the sheathing to protect it from environmental damage. Proper structural requirements can be met by bracing or exterior sheathing. Please consult your designer or engineer for further details.

1. Cladding With Strapping Attachment*

For wood- or metal-framed assemblies, corner bracing is recommended at corners and around large openings. The framing must be structurally reinforced with either cross bracing or structural sheathing. Fasten Enerfoil to wood studs with washered nails. Ensure that fastener penetrates a minimum of 19 mm (3/4 in) into the framing. Fasten Enerfoil to steel studs using mechanical fasteners and washers.

2. Cladding with Masonry Ties*

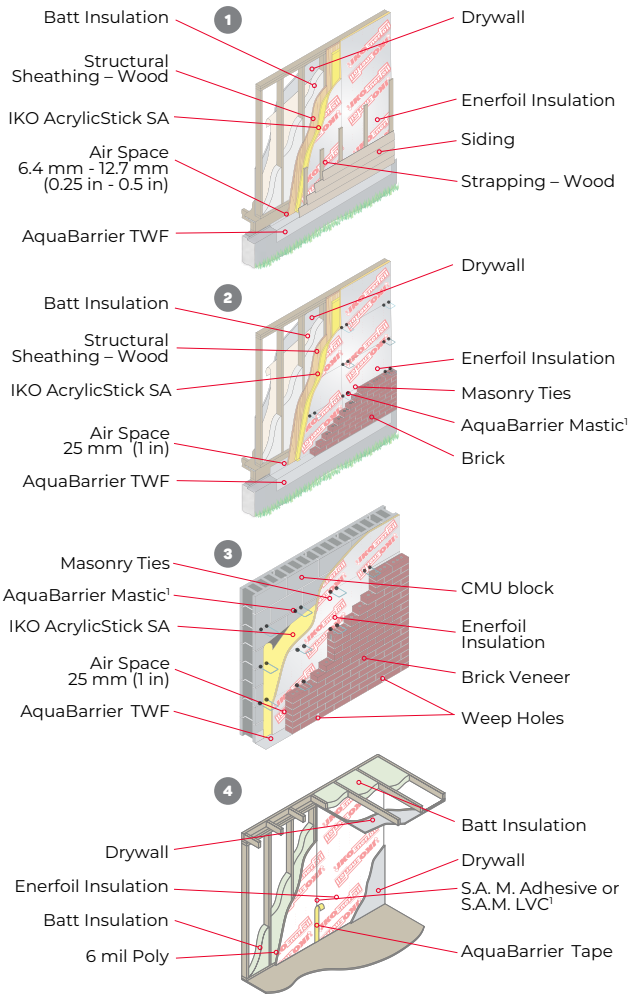
Fasten Enerfoil to wood studs with washered nails. Ensure that the fastener penetrates a minimum of 19 mm (3/4 in) into the framing. Fasten Enerfoil to steel studs with washered mechanical fasteners.

3. Block Wall Construction*

Attach Enerfoil against block wall with air/vapour barrier. Cut boards to friction fit between building code-approved masonry ties.

4. Interior Ceiling & Wall Applications

When used in interior ceiling and wall applications, Enerfoil must be protected from the building interior by a minimum 12 mm (1/2 in) gypsum board. The use of an interior vapour retarder may not be required if the seams are taped. Consult your local building code. For walls, install Enerfoil with edges in direct contact with the framing members.



*IKO AquaBarrier AVB with S.A.M Adhesive can also be used in these assemblies. [1]When using an IKO-approved primer, adhesive or mastic, use in a well-ventilated area. Avoid breathing vapour. It is recommended to wear solvent-resistant gloves and NIOSH-approved respirator. Please refer to "IKO Insulation Fastener Guide" for further information. Note: Three of the illustrations show wood stud framing and sheathing, but other types of framing and sheathing may be used. Drawings are for illustration purposes only. Consult your design professional.

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ACCESSORY PRODUCTS

AquaBarrier™ AVB

- AquaBarrier AVB is a self-adhering non-permeable membrane providing superior performance in wall assemblies where an air and vapour barrier is required.
- It is available in both standard and low temperature grades in a variety of roll sizes.
- It is manufactured by integrally bonding IKO-modified asphalt to a high-density, cross-laminated woven polyethylene film.
- It provides an effective barrier to moisture vapour transmission and air leakage.

AquaBarrier™ Tapes 25 & AquaBarrier™ AVB Tapes 40

- Provide an effective barrier to moisture vapour transmission and air leakage, when installed according to IKO specifications. The use of IKO adhesives (S.A.M. or S.A.M.LVC) is required.
- Available in 3", 4", 6", 9", 12", 18", 24", 26", 36" in 25 mils or 40 mils thickness.

Enerfoil Insulation - Typical Physical Properties

CHARACTERISTICS	UNITS	NOMINAL VALUE		TEST METHOD	
Compressive Strength:	kPa (psi)	110 (16)		ASTM D1621	
Tensile Strength:	kPa (psi)	69 (10)		ASTM D1623	
Flexural Strength MD/XD:	kPa (psi)	618 / 805 (89 / 116)		ASTM C203	
Water Absorption:	% Vol./Vol.	3.5		ASTM C209	
Dimensional Stability @ 70°C MD/XD:	%	±2 / ±2		ASTM D2126	
R-Value – Initial and Design LTTR	Btu/h·ft2·°F	Initial R-Value	Design LTTR R-Value	Initial R-Value	Design LTTR R-Value
12 mm (0.5 in):		3.4	3.0	ASTM C518	CAN/ULC S770
18 mm (0.75 in):		5.1	4.4		
25 mm (1.0 in):		6.8	5.9		
38 mm (1.5 in):		10.2	8.9		
50 mm (2.0 in):		13.6	11.8		
64 mm (2.5 in):		17.0	14.8		
75 mm (3.0 in):		20.4	18.0		
89 mm (3.5 in):		23.8	21.0		
100 mm (4.0 in):		27.2	24.0		
Water Vapour Transmission Rate (WVTR):	ng/Pa·s·m² (perms)	<2.6 (<0.05)		ASTM E96 (Method A)	
Air Permeability @ 75 pa:	L/s·m²	<0.02		ASTM E2178	
Air Leakage Rate Classification:	—	Class A1		CAN/ULC S742-11 ASTM E2357-11[1]	
Flame Spread:	—	<55 <75		CAN/ULC-S102 ASTM E84	
Smoke Developed:	—	<500 <450		CAN/ULC-S102 ASTM E84	
Service Temperature:	°C (°F)	-40 to 100 (-40 to 212)		—	
Width Tolerance:	mm (in)	±4 (0.16)		ASTM C303	
Length Tolerance:	mm (in)	±2 (0.08)			
Sound Transmission Class (STC):	—	11 - 14		ASTM E90 (09)	
Odour Emission:	—	Pass		ASTM C1304 (08)-2013	

[1]When joints & penetrations detailed appropriately. [2]Stated thermal resistance values are based upon conditioning requirements and test methodology found in ASTM C1289 and ASTM C518 for foil-faced polyisocyanurate insulation. See also Material Safety Data Sheet – MSDS #1511 or MSDS #1911. All values shown are approximate.

All values shown are approximate. The information on this sheet is based on data considered to be true and accurate based on periodic internal testing and production measurements at time of manufacture. The information is offered solely for the user's consideration, investigation and verification, and is subject to change without notice. Nothing contained herein constitutes or represents a warranty or guarantee for which the manufacturer can be held legally responsible. IKO assumes no responsibility for errors that may appear in this document. Please refer to Product Data Sheets for more technical information.

Find out more about our roofing, waterproofing and insulation products now by talking to an IKO sales representative or your professional contractor, or contact us directly at: **Canada 1-855-IKO-ROOF (1-855-456-7663)**, **United States 1-888-IKO-ROOF (1-888-456-7663)** or visit our website at: **IKO.COM/COMM**.

CCMC 13188-L

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