



Breathable Polyisocyanurate Sheathing



 **HCFC-free**

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

- Provides high thermal resistance of R6 per inch (RSI 1.05 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 **Ener-Air** achieves the same R-value (RSI) as other thicker types of insulation.
- Environmentally friendly. **Ener-Air** does not contain HCFC's, making it an ideal "Green" product. **Ener-Air's** Energy Star® certification means that it clearly contributes to reducing energy consumption. Can also contribute to points under LEED, EnerGuide and other energy efficiency rating programs.
- User-friendly. Coated glass facers on both sides of the sheathing provide moderate abuse-resistance on the job site. **Ener-Air** is lightweight & easy to cut, thus reducing labor costs on site.
- Provides versatility. Coated glass fiber facings provide the increased moisture resistance necessary for cavity wall applications. **Ener-Air'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.
- Available in 4' x 8' boards in a variety of thicknesses including 19mm (.75"), 25mm (1"), 38mm (1.5") and 51mm (2.0").
- Not only is **Ener-Air** a superior insulating product but doubles as an air barrier as well. When suitably detailed the **Ener-Air** system can be a code-compliant air barrier assembly. Thus fulfilling two jobs at once.

Applications

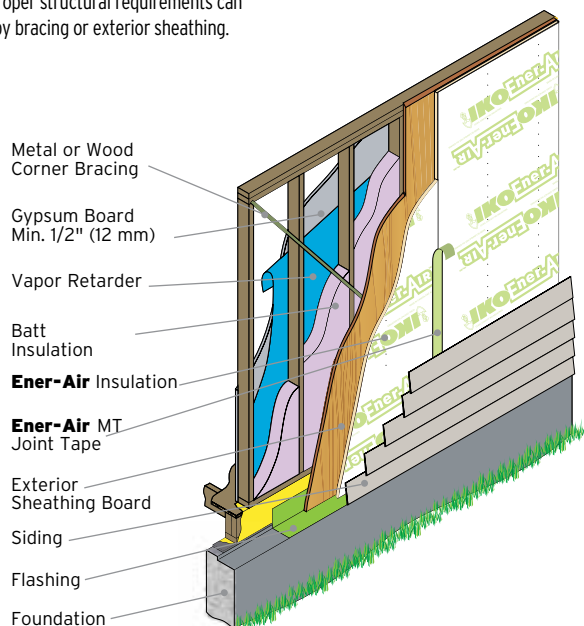
Consult your local Building Code for requirements pertaining to air barriers, vapor retarders, joint treatment and strapping. Use and application of this product must be in accordance with all local, provincial and national building code requirements. See applications instructions for further details on application. **Note:** In order to reduce exposure to the elements, it is important to apply the exterior veneer over **Ener-Air** as soon as practical, following its installation. If it will be left exposed for 60 days, keep a protective covering over the sheathing.

Frame Construction Siding

For wood framing, corner bracing is recommended at corners and around large openings.

Ener-Air 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 **Ener-Air** 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.

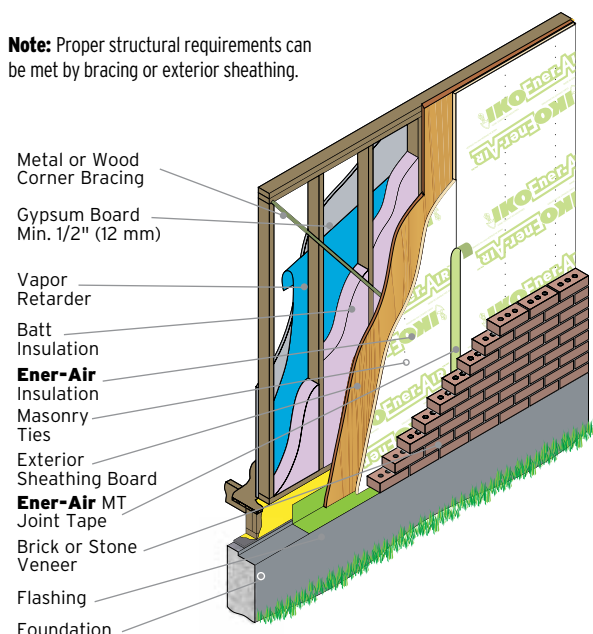
Note: Proper structural requirements can be met by bracing or exterior sheathing.



Construction Brick Veneer

For wood framing **Ener-Air** 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 **Ener-Air** 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.

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

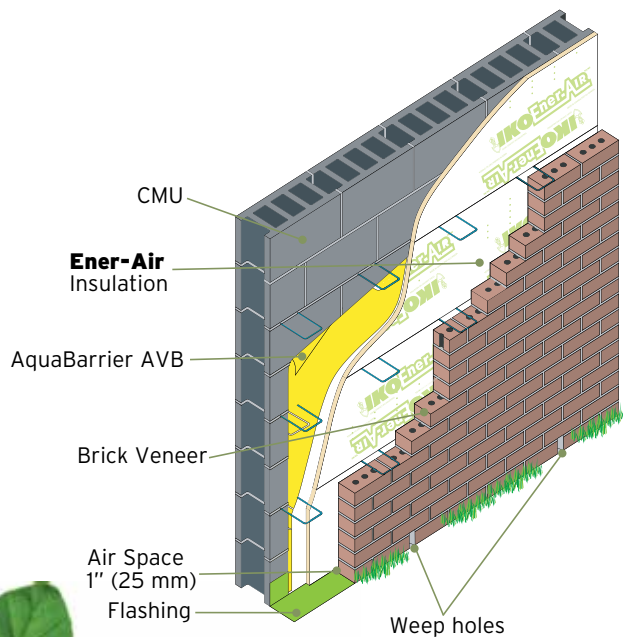


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Applications Cont'd

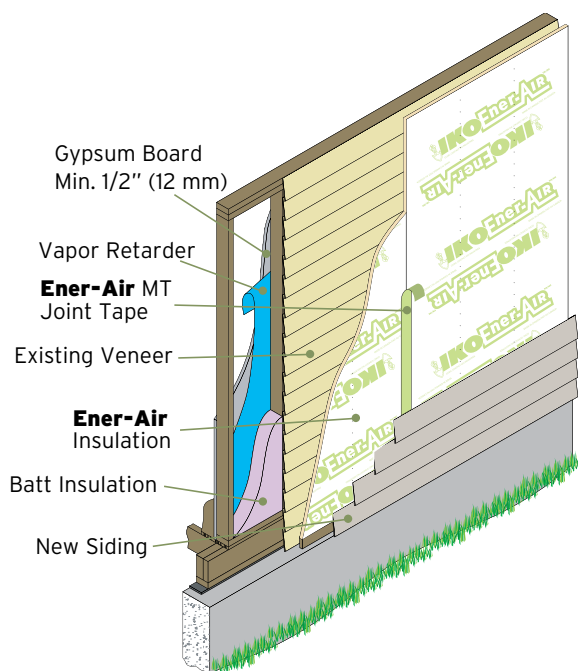
Block Wall Construction

Ener-Air 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 **Ener-Air** 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.



Storage

- It is recommended that **Ener-Air** 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: **Ener-Air** should not be used below grade where it is subject to water infiltration.




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	≥ 60	CAN/ULC-S704	ASTM E96	> 60
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: 0.75 in. (19 mm) 1.0 in. (25 mm) 1.5 in. (38 mm) 2.0 in. (51 mm)	Btu·hr·ft ² ·°F (RSI)	0.77 (4.5) 1.05 (6.0) 1.58 (9.0) 2.10 (12.0)	CAN/ULC-S704	CAN/ULC - S770	-
Service Temperature	°F (°C)	-40 to 212 (-40 to 100)	-	-	-
Flame Spread Index Smoke Density Index	-	≤ 350 ≤ 225	-	CAN/ULC - S102	-
Air Barrier (@75Pa) Unconditioned	L/s.m ²	<0.0005	CAN/ULC S741	ASTM E2178	<0.02
Air Barrier(@75Pa) Conditioned	L/s.m ²	<0.0005	CAN/ULC S741	ASTM E2178	Does not increase by more than 0.001

* Stated thermal resistance values are based upon conditioning requirements and test methodology found in ULC S-704 and CAN/ULC S770 for polyisocyanurate insulation. As a conservative estimate for long-term thermal resistance design value, R6 (RSI 1.05) per inch thickness is typically used.

Codes & Compliances

ASTM 1289	Type II, Class 2
CAN/ULC S704-03	Type I, Class 3
CAN/ULC S102	Flame Spread ≤ 350 Smoke Density Index ≤ 225


**ENERGY STAR
HOME SEALING**

EPA recommends sealing the "envelope" that surrounds your living space:

- the ceiling
- outer walls
- windows
- floors

ENERGY STAR is a program of the U.S. Environmental Protection Agency and the U.S. Department of Energy.

To save on your heating and cooling bill and increase the comfort of your home:

- Add insulation
- Seal air leaks
- Choose ENERGY STAR qualified windows when replacing windows

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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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