



DATA SHEET

Product Description:

Atlas EnergyShield® rigid insulation is a closed cell polyisocyanurate (polyiso) foam core, faced with a radiant barrier quality reflective foil facer on one side, and a non-reflective, red acrylic-coated facer on the other side. EnergyShield® combines high R-value, durable foil facers, and water resistive attributes in a high performance rigid insulation board. EnergyShield® is suitable for a variety of continuous insulation (CI) applications.

Panel sizes are 4' by 8' or 4' by 9'. Panels can be supplied in nominal 16" or 24" widths for use in cavity wall applications. Custom sizes are also available.

RECOMMENDED APPLICATIONS:

High R-value and very low water absorption make EnergyShield® an extremely versatile insulation board for a variety of applications. It is designed for all types of construction including commercial, institutional and residential.

- Exterior or interior insulating sheathing insulated sheathing for walls framed with wood or steel studs. Interior application requires a thermal barrier
- Exterior or interior CI (continuous insulation) for cmu/block/concrete wall systems. Interior application requires a thermal barrier
- Exterior CI (continuous insulation) for installation over wood or gypsum sheathings
- Use over existing cladding to improve energy efficiency and provide a level surface prior to installing a new cladding

COMPLIANCES:

- CCMC Evaluation Report #12422-R
- CAN/ULC S704, Type 2, Class 1
- CAN/ULC S102 Burn Characteristics, Flame Spread >25, <500
- ASTM E84 Fire Test Results
Flame Spread Index <75
Smoke Development Index <450
- Uses CFC-, HCFC-, and HFC-free foam blowing technology with zero ozone depletion potential (ODP) and zero (negligible) global warming potential (GWP)

THERMAL VALUES:

R-value ^{1,2}	RSI	Nominal Board Thickness ³	
		Inches	mm
3.3	0.58	0.5	13
5.0	0.88	0.75	19
6.5	1.14	1.0	25
9.8	1.73	1.5	38
10.5	1.84	1.6	41
13.1	2.31	2.0	51
16.0	2.82	2.5	64
19.7	3.47	3.0	76

¹ Conditioned thermal values were determined by ASTM Test Method C518 at 75°F mean temperature. Test specimens were conditioned in accordance with procedures outlined in CAN/ULC S704, Section 6.4.2.1.
² "R" means resistance to heat flow, the higher the R-value, the greater the insulating power.
³ Other sizes available upon request. Contact your local Atlas sales office.



* non-reflective side shown

ATLAS ENERGYSHIELD® MEETS OR EXCEEDS THE FOLLOWING PHYSICAL PROPERTIES:

Property	Test Method	Test Method Minimum Requirements
Compressive Strength	ASTM D1621	> 140 kPa (20 psi)
Tensile Strength	ASTM D1623	> 35 kPa (5.08 psi)
Flexural Strength	ASTM C203	> 275 kPa (40 psi)
Water Vapor Permeance	ASTM E96 desiccant method	≤15.0ng/(Pa•s•m ²) at 25.4mm (≤0.3 perm)
Water Absorption	ASTM C209	< 3.5% by volume (typically <1.6% by volume)
Dimensional Stability at -29°C, Ambient Humidity at 80°C, Ambient Humidity at 70°C, 97% Relative Humidity	ASTM D2126 ASTM D2126 ASTM D2126	± 2% length or width ± 2% length or width ± 2% length or width
Service Temperatures	—	(-73°C to 122°C)








INSTALLATION:

EnergyShield® may be installed over common types of construction substrates using fasteners or adhesives. This includes concrete, wood, wood stud, steel stud, glass-mat gypsum, air and vapour barrier membranes. For specific installation instructions, contact Atlas.

CONFIGURATION FOR SHEATHING MEMBRANE:

Atlas EnergyShield® can take the place of a sheathing membrane in some jurisdictions. In this type of installation it is typically required to tape or seal all joints between boards and at penetrations and openings. Atlas recommends sealing into rough opening flashing and to other portions of the building, including the roof and below grade. Atlas EnergyShield® foil facers are compatible with most standard joint sealants and adhesives. Consult your local representative for suggestions, contact your chosen product manufacturer for specific compatibility.

THE ELEMENTS OF AN ENERGY EFFICIENT WALL SYSTEM

	Features	Advantages	Benefits
	Thermal	A higher R-value per inch of continuous insulation (CI) delivers a thinner wall profile and reduces thermal bridging.	Increased energy efficiency. Reduced cost for materials and labor.
	Fire	CAN/ULC S102 Burn Characteristics, Flame Spread >25, <500	Polyiso is a thermoset material that chars in place and does not drip.
	Water	EnergyShield® has low water absorption and provides a good water shedding surface. It can also eliminate the need for a separate sheathing membrane.	Added protection from liquid water (rain) damage and potential mould.
	Air	EnergyShield® provides resistance to air movement and can also eliminate the need for a separate sheathing membrane.	Can support a more energy efficient building by limiting air exfiltration and infiltration. Help protect your building from moisture-laden air entering wall cavities for potential condensation issues.
	Vapour	Greatly minimizes water vapour transmission through the board.	Can reduce the potential for condensation by its low perm rating (less water vapor) and high insulating value.
	Environmental	HCFC-, CFC-, HFC- Free blowing agent technology.	Zero Ozone Depletion Potential (ODP) and virtually no Global Warming Potential (GWP). Less fossil fuel used to heat/cool buildings. Contains 9.5-13.6% recycled content by weight.
	Air Quality	Atlas polyiso has been tested for VOC and formaldehyde emissions, in which reported emissions were below the emission levels allowed under both the GREENGUARD and GREENGUARD Schools and Children criteria.	Breathe Better. Foam is not a food source for mould.

PRECAUTIONS/LIMITATIONS:

- This product will burn and may contribute to flames and smoke spreading.
- Design use of this product must always follow local codes, especially with regards to Sheathing Membrane and Vapor Retarder. Atlas highly recommends the use of a dew point calculation of the proposed wall assembly to determine the types and locations of weather resistive barriers as well as needed insulation thickness/R-value to mitigate any condensation potential.
- EnergyShield® is not a structural product, local codes must be followed for bracing requirements.
- Storage: Boards should be stored indoors. If left outdoors for any length of time, keep dry by covering completely with a waterproof tarpaulin. Store on flat pallets elevated at least 4" above the floor or ground and standing water.
- Follow the cladding manufacturer's recommendation for attachment of the cladding.
- EnergyShield® is not intended to be exposed in excess of 60 days. Atlas recommends that all of the wall cladding material be installed within 60 days of installing the product.

ACCESSORY PRODUCTS (NOT SUPPLIED BY ATLAS):

- Fasteners – Ensure compatibility with the substrate and wall components. Length must allow a minimum of ¾" inches penetration into wood substrates.
- Nails – ¾" diameter galvanized roofing nails.
 - 6D ring shank nails and 1½" diameter plastic washers.
- Staples – 1" crown 16 gauge staples driven at least ½" into framing.
- Plastitop Nails – self drilling screws with ¾" diameter cap washers with ¾" framing penetration.
- Joint Tape – UV resistant polypropylene film coated with high shear, high tack solvent based acrylic adhesive or other tape as listed by CCMC and approved by Atlas.
- Adhesives – Many construction adhesives and insulation adhesives are compatible with EnergyShield®. Consult the adhesive manufacturer or Atlas for more information.

WARRANTY:

A 15 year limited thermal warranty is available. Please see www.AtlasWallCi.com or contact your Atlas representative. Atlas Roofing Corporation assumes no responsibility for building design or construction, which is solely the responsibility of the owner, architect, engineer or contractor.

Technical specifications are intended as general guidelines only, physical properties are representative based on testing, no warranties are given except for those specifically written by Atlas for its products.

LOCAL Production and Support: Atlas has the largest production footprint of any polyiso manufacturer for quick access to the products you need.

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