



# EnergyShield®

## Continuous Wall Insulation

**DESCRIPTION:** Atlas EnergyShield® Wall insulation is composed of a closed cell polyisocyanurate (polyiso) foam core, faced with tri-laminate foil. The blowing agent used to produce the polyiso foam core does not contain any CFCs, HCFCs or HFCs. EnergyShield® has zero Ozone Depletion Potential (ODP) and negligible Global Warming Potential (GWP). EnergyShield® combines high R-value, durable foil facers, and water resistive attributes in a high performance rigid wall insulation. 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 masonry cavity wall applications. Custom sizes are also available.

**APPLICATION:** EnergyShield® is recommended for use in residential applications as well as some commercial construction applications. Check local building codes for compliance.

Common applications include:

- Exterior or interior rigid insulation (interior application requires a thermal barrier) for walls framed with wood or steel studs
- Exterior or interior continuous insulation (CI) for masonry or concrete wall systems, including exterior masonry cavities
- Exterior continuous insulation (CI) over wood or gypsum sheathings
- Use over existing cladding to improve energy efficiency with continuous insulation (CI) and provide a level surface prior to installing a new cladding
- Approved of use in attics and crawlspaces without requiring the use of a thermal barrier. (ICC-ES A12, Appendix B)
- Knee wall and vaulted ceiling applications (with an approved thermal barrier)
- Insulation for use in tilt-up wall panels
- Under slab insulation
- Various OEM applications

### ENERGYSHIELD® MEETS OR EXCEEDS THE FOLLOWING PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TEST METHOD MINIMUM REQUIREMENTS
FLAME SPREAD	ASTM E84	< 75
SMOKE DEVELOPMENT	ASTM E84	< 450
MOISTURE VAPOR TRANSMISSION (ASTM E96 DESICCANT METHOD)	ASTM E96	< 0.1 Perm (5.7ng/(Pa*s*m <sup>2</sup> )) Class I vapor retarder per ICC
WATER ABSORPTION	ASTM C209	< 1% by Volume *Typical Results < 0.5% by Volume
DIMENSIONAL STABILITY	ASTM D2126	< 2% Linear Change *Typical Results < 1% Linear Change
SERVICE TEMPERATURES	-	-100°F to +250°F (-73°C to 122°C)

### THERMAL DATA

R-VALUE <sup>1,2</sup>	NOMINAL BOARD THICKNESS <sup>3</sup>
3.3	0.5"
5.0	0.75"
6.5	1.0"
9.8	1.5"
10.5	1.6"
13.1	2.0"
22.2	3.5"
26.0	4.0"

<sup>1</sup> Conditioned thermal values were determined by ASTM Test Method C 518 at 75° mean temperature. Test specimens were conditioned in accordance with procedures outlined in ASTM C1289, Section 11.1.2.1.

<sup>2</sup> "R" means resistance to heat flow. The higher the R-value, the greater the insulating power.

<sup>3</sup> Other sizes available upon request. Contact your local Atlas sales office.

### CODES AND COMPLIANCES

- **ASTM C1289 Type I, Class 1**
- **ASTM E84 Flame Spread**, less than 75
- **ASTM E84 Smoke Development**, less than 450
- **ASTM E2357 Air Barrier Assembly Test** – Passed
- **International Building Code (IBC)**, Section 2603
- **International Residential Code (IRC)**, Section R316
- **Water Resistive Barrier** ICC-ES ESR-1375
- **ASHRAE 90.1 / ASHRAE 189.1 / IECC / IGCC** Continuous Insulation Standards
- **Foil faced insulation** greater than ½ inch thick is prescriptively defined as an air barrier material by **IECC and ASHRAE 90.1**
- **Class I vapor retarder** Sections on Foam Insulation
- **Miami-Dade County Approved**
- **California Approved** Insulation Registry T 1231





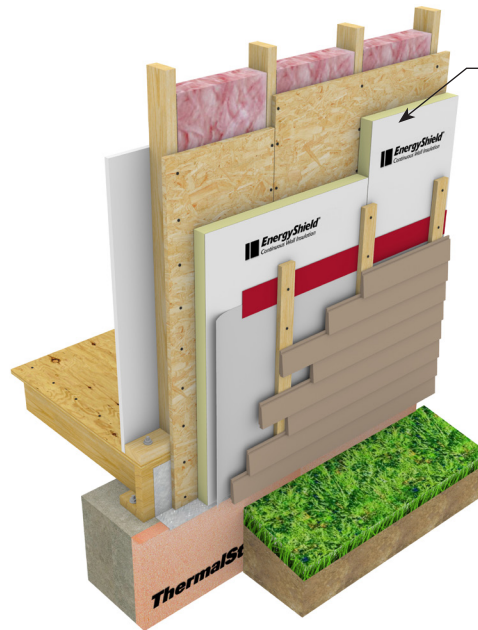
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**INSTALLATION:** EnergyShield® may be installed on the exterior, interior, or within wall assemblies using fasteners, adhesives, or a combination of both. Check local building codes for thermal barrier requirements when using EnergyShield®. Some of the common installations for EnergyShield® include, but are not limited to, wood stud walls, masonry walls, concrete walls, over structural sheathing, steel stud walls, over exterior gypsum, over air and vapor barrier membranes. For specific installation instructions, contact Atlas.

### CONFIGURATION FOR WATER RESISTIVE BARRIER (WRB) AND AIR BARRIER:

EnergyShield® can be used as part of a WRB and potentially part of an air barrier assembly. EnergyShield® has passed ASTM E2357 as a component of an air barrier assembly. In these types of assemblies it is required that all joints, penetrations, and openings be taped or sealed by other means. Atlas recommends flashing EnergyShield® into rough openings and other building transitions. The foil facers are compatible with most flashing or sheathing tape, joint fillers, sealants, and adhesives. Consult the product manufacturer for specific compatibility.



EnergyShield® combines high R-value, durable foil facers and water resistive attributes suitable for a variety of continuous insulation CI applications.

### PRECAUTIONS / LIMITATIONS:

- This product will burn and may contribute to flames and smoke spreading.
- When designing with or using this product always follow local codes, especially with regards to WRB, Air Barrier 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 R-value to mitigate any condensation potential.
- EnergyShield® is not a structural product so local codes must be followed for required bracing of the frame wall.
- Storage: Prior to installation EnergyShield® should be stored indoors. If left outdoors for any length of time it must be kept dry by covering completely with a waterproof tarpaulin. Store on flat pallets elevated at least 4 inches above the floor or ground and standing water.
- Follow the cladding manufacturer's recommendation for attachment of the cladding.
- Installed EnergyShield® is not intended to be left exposed to the elements in excess of 60 days. Atlas recommends that all wall cladding material be installed within 60 days of installing the EnergyShield®.

**WARRANTY:** A 15-year limited thermal warranty is available. Please see [www.atlasroofing.com](http://www.atlasroofing.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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Fax: (717) 975-6957	Fax: (936) 829-5363	Fax: (866) 740-6019	Fax: (706) 882-4047	Fax: (303) 252-4417	Fax: (602) 477-8897	Fax: (877) 909-4001	Fax: (604) 395-836