EnergyShield® CGF (formerly Rboard®)

Continuous Wall Insulation

DESCRIPTION: Atlas EnergyShield® CGF (formerly Rboard®) is composed of a closed cell polyisocyanurate (polyiso) foam core, faced with a non-reflective coated glass-mat facer on both sides. The blowing agent used to produce the polyiso foam core does not contain any CFCs, HCFCs or HFCs. EnergyShield® CGF has zero Ozone Depletion Potential (ODP) and negligible Global Warming Potential (GWP). Atlas EnergyShield® CGF combines high R-value, enhanced durability from two coated glass-mat facers, and water resistive attributes in a high performance rigid wall insulation. EnergyShield® CGF 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″ and 24″ widths for use in masonry cavity wall applications. Custom sizes are also available.

APPLICATION: EnergyShield® CGF is recommended for use in residential applications as well as some commercial construction applications. Check local building codes for compliance. The coated glass-mat facers enhance the product's durability and are more permeable than foil facers.

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 precast, tilt-up and cast-in-place insulated concrete wall panels
- Under slab insulation
- Various OEM applications

ENERGYSHIELD® CGF MEETS OR EXCEEDS THE FOLLOWING PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TEST METHOD MINIMUM REQUIREMENTS
TENSILE STRENGTH	ASTM D1623	>35 kPa (5.08 psi)
FLEXURAL STRENGTH	ASTM C203	>275 kPa (40 psi)
WATER VAPOR PERMEANCE	ASTM E96 desiccant method	>60 ng/(Pa•s•m²) at 25.4mm (1.05 perm)
WATER ABSORPTION	ASTM D2842	<3.5% by volume (typically <0.6% 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)

THERMAL DATA

R-VALUE[1,2]	RSI	NOMINAL BOARD THICKNESS[3]	
		INCHES	MM
3.0	0.53	0.5	13
4.5	0.79	0.75	19
6.0	1.06	1.0	25
9.0	1.58	1.5	38
12.1	2.13	2.0	51
15.3	2.69	2.5	64
18.5	3.26	3.0	76
21.7	3.82	3.5	89
25.0	4.40	4.0	102

[1] Conditioned thermal values were determined by ASTM Test Method C518 at 24°C 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.

CODES AND COMPLIANCES

- **CCMC Evaluation Report #12423-L**
- **CAN/ULC S704 Type 2, Class 3**
- **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)

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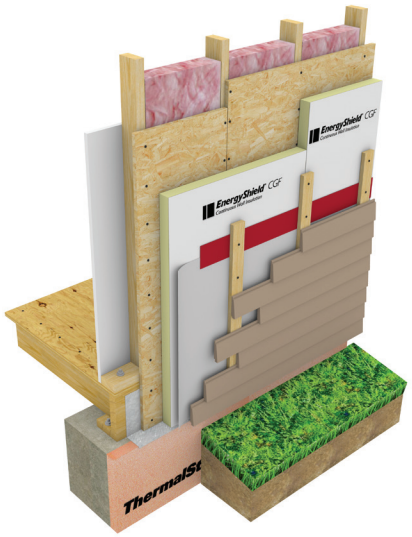
INSTALLATION: EnergyShield® CGF (formerly Rboard®) may be installed on the exterior, interior, or within wall assemblies using fasteners, adhesives, or a combination of both. Check local building codes for thermal barrier requirements when using EnergyShield® CGF. Some of the common installations for EnergyShield® CGF 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® CGF can be used as part of a WRB and potentially part 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® CGF into rough openings and other building transitions. The coated glass-mat facers are compatible with most flashing or sheathing tape, joint fillers, sealants, and adhesives. Consult the 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 <500 ASTM E84 <75 Flame Spread Index, <450 Smoke Development Index.	Polyiso is a thermoset material that chars in place and does not drip.
WATER	EnergyShield® CGF 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. Neither foam nor facer is a food source for mould.
AIR	EnergyShield® CGF 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	Reduces water vapour transmission.	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. Inorganic/ paperless facer.	Zero Ozone Depletion Potential (ODP) and virtually no Global Warming Potential (GWP). Less fossil fuel used to heat/cool buildings. Contains 2.5–9% 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 and facers are not food sources for mould. Facer is stable and mould resistant as per Greenguard ASTM D6329 rating of 4.



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® CGF is not a structural product so local codes must be followed for required bracing of the frame wall.
- Storage: Prior to installation EnergyShield® CGF 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® CGF 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® CGF.

WARRANTY: A 15-year limited thermal warranty is available. Please see 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.

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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