EnergyShield® PanelCast®

Continuous Concrete Insulation

DESCRIPTION: Atlas EnergyShield PanelCast 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 PanelCast has zero Ozone Depletion Potential (ODP) and negligible Global Warming Potential (GWP). Atlas EnergyShield PanelCast combines high R-value, enhanced durability from two coated glass-mat facers, and water resistive attributes in a high performance rigid wall insulation. EnergyShield PanelCast is suitable for a variety of continuous insulation (CI) applications in concrete wall systems.

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 PanelCast is recommended for use in insulated concrete panels, forms and tilt-up walls in commercial and residential 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:

- Precast insulated concrete sandwich panels
- Continuous insulation in concrete wall systems
- Insulation for use in precast, tilt-up and cast-in-place insulated concrete wall panels
- Under slab insulation
- Various OEM applications

ENERGYSHIELD PANELCAST MEETS OR EXCEEDS THE FOLLOWING PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TEST METHOD MINIMUM REQUIREMENTS
FLAME SPREAD	ASTM E84	<25
SMOKE DEVELOPMENT	ASTM E84	<450
MOISTURE VAPOR TRANSMISSION (ASTM E96 DESICCANT METHOD)	ASTM E96	1.2 Perm at 1-inch
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)
COMPRESSIVE STRENGTH	ASTM D1621	25 psi

THERMAL DATA

R-VALUE[1,2]	NOMINAL BOARD THICKNESS[3]
3.0	0.5″
4.5	0.75″
6.0	1.0″
9.0	1.5″
12.1	2.0″
15.3	2.5″
18.5	3.0″
21.7	3.5″
25	4.0”

[1] 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.
[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

- **ASTM C1289 Type II, Class 2**
- **ASTM E84 Flame Spread,** less than 25
- **ASTM E84 Smoke Development,** less than 450
- **CAN/ULC S704** Type 2 Class 3 Or Type 3 Class 3
- **CAN/ULC S102** Rated–Flame Spread Rating <500
- **International Building Code (IBC),** Section 2603
- **International Residential Code (IRC),** Section R316
- **ASHRAE 90.1/ASHRAE 189.1/IECC/IGCC** Continuous Insulation Standards
- **Class III Vapor Retarder** at 1 inch (>1.0 perm)
- **California Approved Insulation Registry** T 1231
- **Has acheived GREENGUARD GOLD Certification**

PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS: UL.COM/GG UL 2818

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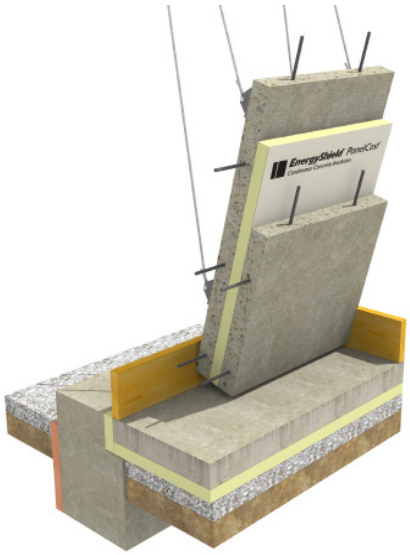
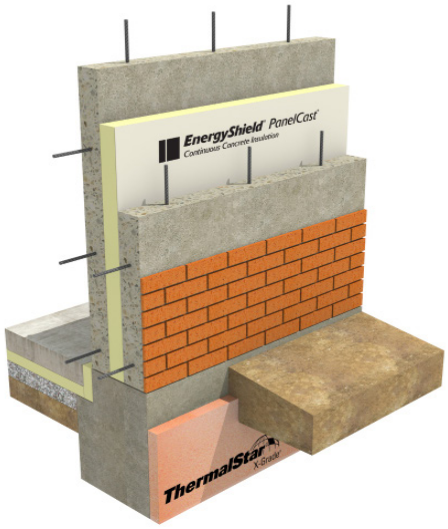
INSTALLATION: EnergyShield PanelCast is designed for use in concrete panel walls (precast, tilt-up or cast-in-place) where the product is sandwiched between two wythes of concrete with connectors holding together the panels. For specific installation instructions, contact panel connector system manufacturers.

USE AS AN ALTERNATE TO XPS AND EPS WHEN HIGHER R-VALUE AND THINNER PANEL PROFILE IS DESIRED:

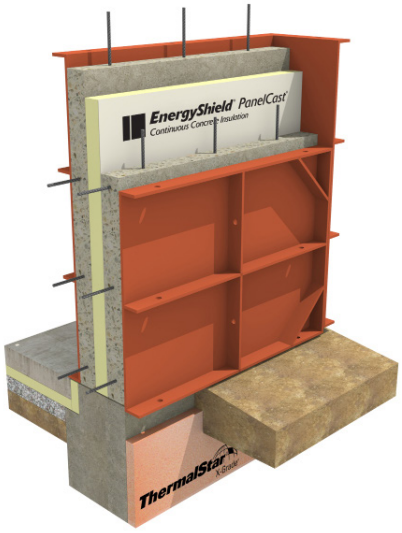
EnergyShield PanelCast polyiso is a high performance alternative for use in insulated concrete panels. PanelCast is designed for excellent performance during casting and is compatible with most panel connector systems.



SITE-CAST TILT-UP



PLANT PRECAST



CAST-IN-PLACE

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 PanelCast is not a structural product so local codes must be followed for required bracing of the frame wall.
- Storage: Prior to installation EnergyShield PanelCast 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″ above the floor or ground and standing water.
- Follow the concrete connector system manufacturer's recommendation for configuration of panel connector systems.
- Installed EnergyShield PanelCast is not intended to be left exposed to the elements in excess of 60 days.

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