



RIGID POLYISO FOAM INSULATION GUIDE

For Residential and Commercial Applications



CONNECTING FUNCTION WITH FACILITY™

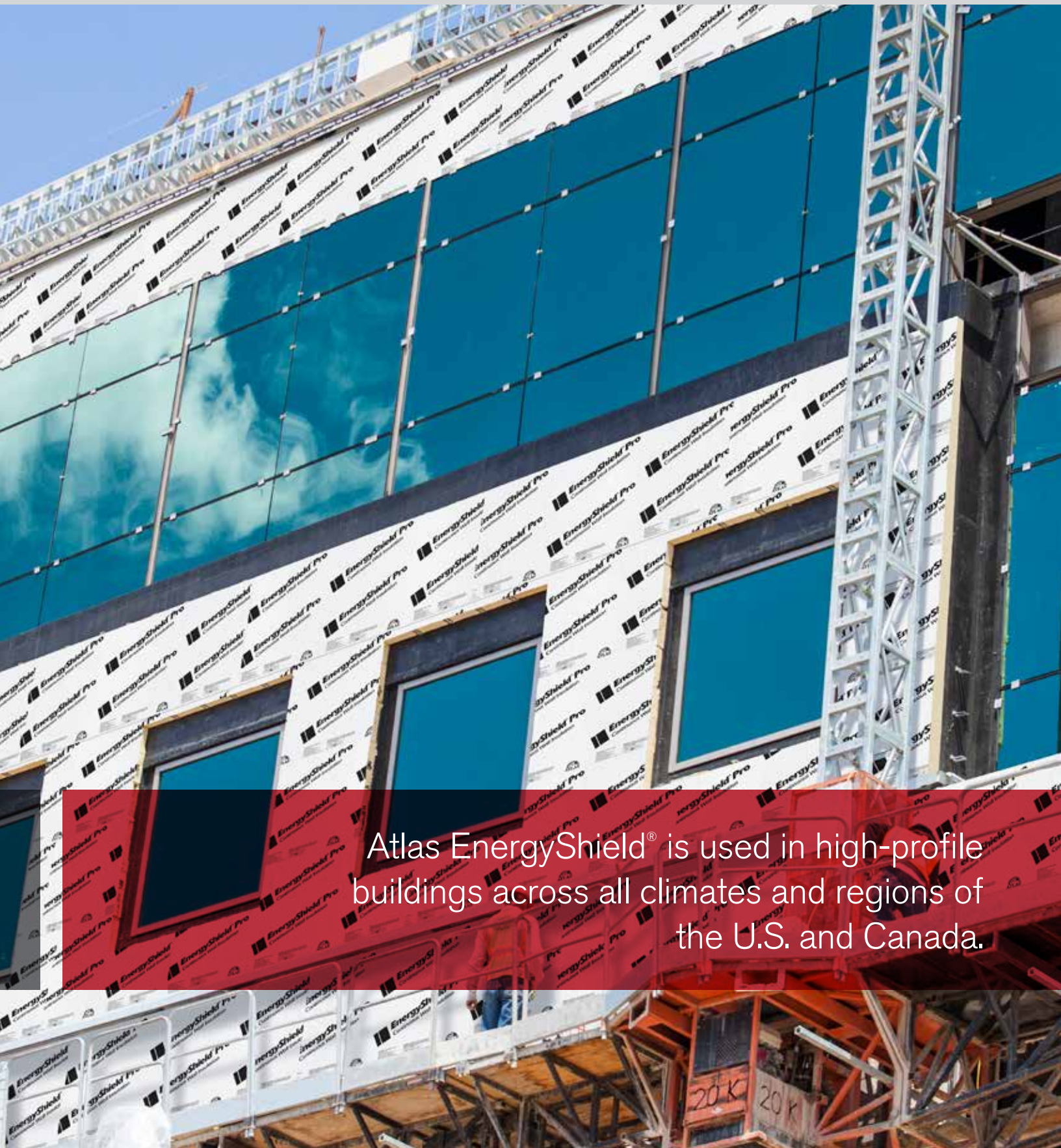
EnergyShield
Continuous Wall Insulation



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INTRODUCTION



Atlas EnergyShield® is used in high-profile buildings across all climates and regions of the U.S. and Canada.

INTRODUCTION

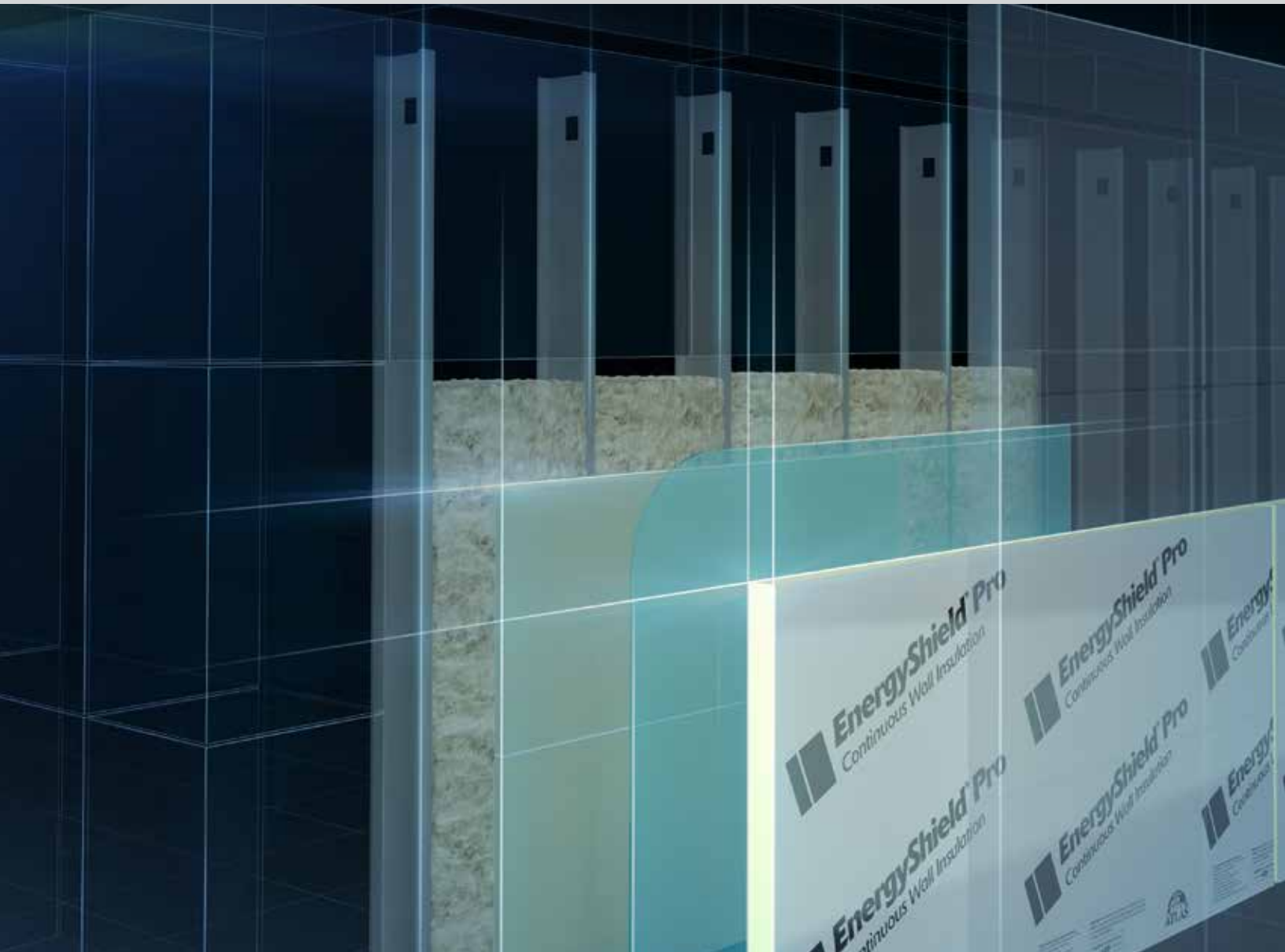


Atlas is an industry leader in polyiso board insulation technology. Investment in our people and processes enables us to achieve the highest levels of customer service, product performance and product quality in the industry. Atlas products come with the peace of mind associated with reliable, consistent engineering and support delivered when and where it is needed.

Founded in 1982, Atlas has grown to become an industry leader and manufacturer of products in a variety of building material categories—including continuous wall insulation. Throughout our history, Atlas has developed a deep collective knowledge of advanced building science to help our customers with projects that are energy efficient, cost effective and profitable.

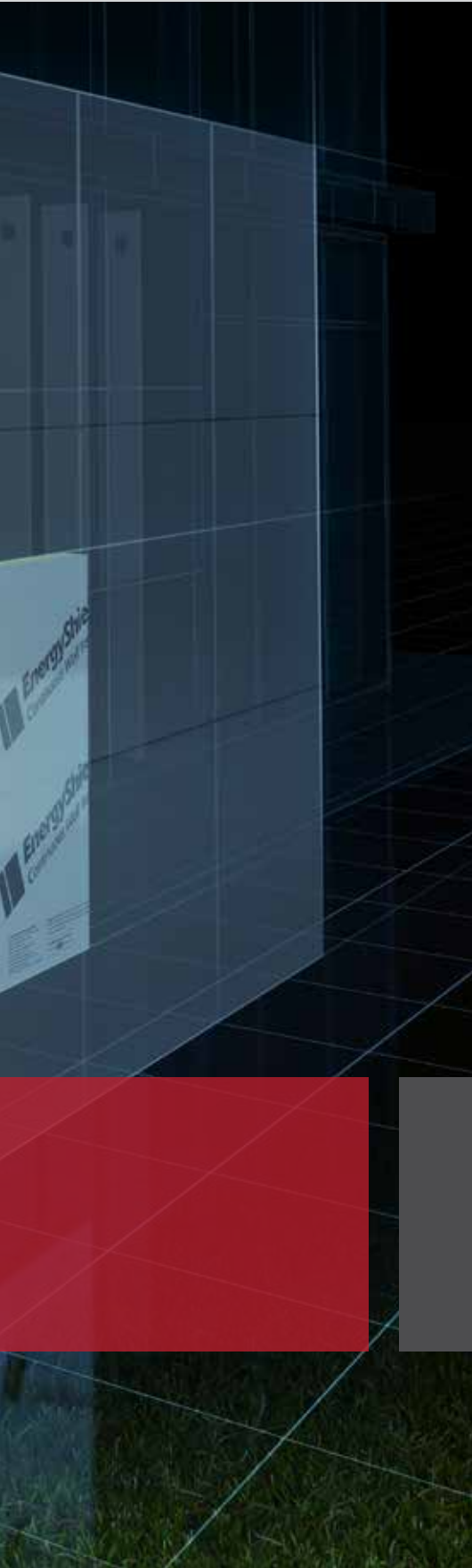
Exterior continuous insulation is the most effective way to thermally insulate building envelopes. By overcoming the thermal bridging issues that traditional insulations can't address and that impair building performance, Atlas exterior wall insulation products enhance envelope design and improve performance. Atlas EnergyShield® wall insulation products are made with a polyiso core, which achieves a high R-Value (the capacity to resist heat flow) with minimal material thickness. With numerous assembly approvals for all types of wall application, EnergyShield continuous wall insulation brings a high level of design flexibility, allowing designers and builders to enjoy unmatched control over their projects' thermal envelope.

THE IDEAL WALL



Atlas and EnergyShield® products help architects' visions become reality. With millions of possible wall assemblies, we have solutions for every dream you build.

THE IDEAL WALL










What does the ideal wall do? Every good wall incorporates some type of thermal insulation, but the ideal wall goes further. The ideal wall incorporates thermal, moisture, vapor and air control into its design. Atlas EnergyShield® insulation solutions are an essential component of this ideal wall.

Atlas EnergyShield provides a multi-functional, single-layer solution for exterior and interior walls that serves as a continuous barrier against energy loss and allows vapor and air management. EnergyShield has a higher resistance to heat flow than alternative insulation types, increasing building efficiency for long-term performance. This allows a thinner wall profile, by taking up less space to deliver the same R-value, minimizing total wall thickness. Moisture and vapor management, controlled airflow and thermal properties reduce the risk of moisture intrusion in wall assemblies, providing protection for buildings that last.

Whether you're designing, constructing or improving a building, you can count on EnergyShield products for every stage of the build. The Atlas EnergyShield family of products is proven to deliver outstanding performance and lasting energy efficiency, and can help earn LEED® credits and meet federal, state and local green building codes. EnergyShield products are also GREENGUARD Gold Certified, ensuring that your project can meet the highest standards for indoor air quality.

With more than 30 years of industry expertise in polyiso manufacturing, Atlas EnergyShield continuous wall insulation products deliver confidence with proven performance.

PRODUCT SELECTOR

PRODUCT	FACER TYPE	TYPE V EXTERIOR	COMMERCIAL WALL TYPE I-V EXTERIOR	TYPE I-V INTERIOR EXPOSED	INSULATED CONCRETE PANELS	ASTM C1289 TYPE, CLASS	FEATURES
 EnergyShield® Continuous Wall Insulation	■	✓ Class B				Type I, Class 1	<ul style="list-style-type: none"> Foil facer Integrated air, water, vapor barrier Residential and light commercial Renovation Attics and crawlspaces
 EnergyShield® CGF Continuous Wall Insulation	●	✓ Class B				Type II, Class 2	<ul style="list-style-type: none"> Integrated air, water barrier Residential and light commercial Reversible Renovation Microbial resistant Attics and crawlspaces
 EnergyShield® Pro Continuous Wall Insulation	■		✓ NFPA 285 & Class A	✓ NFPA 286 & Class A		Type I, Class 1 Type I, Class 2	<ul style="list-style-type: none"> Printed foil facer on one side, white on the other Integrated air, water, vapor barrier Enhanced fire resistance (NFPA 285 & 286) Commercial interiors Commercial exteriors Reversible Basements
 EnergyShield® CGF Pro Continuous Wall Insulation	●		✓ NFPA 285 & Class A			Type II, Class 2	<ul style="list-style-type: none"> Coated glass facer Integrated air, water barrier Enhanced fire resistance (NFPA 285) Commercial exteriors One side black for open joint rainscreen Microbial resistant
 EnergyShield® Ply Pro Continuous Wall Insulation	●		✓ NFPA 285 & Class A			Type V	<ul style="list-style-type: none"> Coated glass facer laminated to FRT plywood Enhanced fire resistance (NFPA 285) Commercial exteriors (primarily metal panel) Microbial resistant Can be installed with or without exterior gypsum in countless NFPA 285 approved wall assemblies
 EnergyShield® Panel/Cast Continuous Concrete Insulation	●			✓		Type II, Class 2	<ul style="list-style-type: none"> R-value superior to XPS and EPS Durable coated glass facers Microbial resistant Precast concrete Architectural concrete sandwich panels Alkali resistant facers Higher performance finished product
 Stucco-Shield® Continuous Wall Insulation	●	✓ Class B				Type II, Class 2	<ul style="list-style-type: none"> Designed for use in stucco assemblies Higher performance finished product Microbial resistant Coated glass facers 4' x 8' boards reduce joints and labor Alkali resistant facers R-value superior to XPS and EPS

This product information has been compiled for your convenience. Please check your local building codes for compliance.

FOIL FACED POLYISO THERMAL DATA

R-VALUE ^{1,2}	3.3	5.0	6.5	9.8	10.5	13.1	16.0	19.7	21.7	26.0
NOMINAL BOARD THICKNESS ³	0.5"	0.75"	1.0"	1.5"	1.6"	2.0"	2.5"	3.0"	3.5"	4.0"

COATED GLASS FACED POLYISO THERMAL DATA

R-VALUE ^{1,2}	3.0	4.5	6.0	9.0	12.1	15.3	18.5	21.7	25.0
NOMINAL BOARD THICKNESS ³	0.5"	0.75"	1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"

¹Conditioned 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.

³Other sizes available upon request. Contact your local Atlas sales office.

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METAL PANEL



EnergyShield® Pro products for commercial insulation from Atlas are the best way to ensure that metal panel claddings will perform with the highest level of energy efficiency. Atlas EnergyShield Pro also provides a functional, rigid wall surface suitable for a variety of cladding types. EnergyShield Pro polyiso insulation provides excellent fire performance, charring in place rather than melting or dripping like other foam plastic insulations. Atlas has extensive NFPA 285 approvals and a wide range of compliant wall assemblies. For every configuration of commercial wall, there is the right Atlas product.

COMMERCIAL

EnergyShield Pro combines Class A fire performance, NFPA 285 compliances and water and air barrier capabilities with the highest available R-value per inch on the market.

EnergyShield® CGF Pro offers the same Class A fire performance as EnergyShield Pro but uses coated glass facers to bring a vapor permeable option that is also highly abuse resistant.

EnergyShield® Ply Pro provides an FRT plywood surface and eliminates the need for separate installation. This reduces labor costs and increases efficiency in a metal building construction project.

METAL PANEL



RECOMMENDATIONS



EnergyShield Pro integrates perfectly into metal panel assemblies and code compliant combinations.



For open joint rainscreen applications, EnergyShield CGF Pro offers a black facer, eliminating the need for a black out fabric.



Steel studs, batt cavity insulation, glass-mat faced sheathing, liquid applied air & moisture barrier, EnergyShield Ply Pro, metal panels.

EnergyShield Pro can be used in wall configurations with or without gypsum sheathing. See our technical Evaluation Report for the full range of design options.

EnergyShield Pro makes it easy to combine performance and style in metal-clad designs.

BRICK, STONE & STUCCO

Beautiful and versatile, brick, stone and stucco have been the choices for durability and classic design for centuries. But they can also present challenges—thermal, moisture, vapor and air control are crucial to their success as a cladding. EnergyShield® pairs perfectly with them, offering integrated air, moisture and vapor central technology. It's a combination that is hard to beat.

COMMERCIAL

EnergyShield® Pro is an all-around solution that can work for insulating brick and provides commercial-grade moisture and fire compliance.

EnergyShield® CGF Pro is great for large-scale commercial applications in which the commercial building needs to “breathe.” It includes a durable coated glass facer that is abuse resistant.

RESIDENTIAL

EnergyShield® For over 30 years, EnergyShield has set the standard for residential continuous insulation. With an R-value of 6.5 per inch, EnergyShield is still the industry leader.

EnergyShield® CGF brings durability together with moisture resistance in vapor-open designs for Type V construction.

Stucco-Shield® Designed for direct-applied stucco, Stucco-Shield is perfect for use with a wide variety of basecoat, mesh and finish systems.

