

ThermalStar[®]

The most cost-effective, performance-based foam insulation

ROOFING

SIDING

BELOW-GRADE



ATLAS EPS
Solutions. Delivered.TM

COMPANY HISTORY

Atlas EPS (formerly Falcon Foam) is a division of Atlas Roofing Corporation, specializing in the development and manufacture of quality, HCFC-free Expanded Polystyrene Insulation products.

Since 1965, our company has played a significant role in the industry-wide growth of EPS technology and product applications. Today, Atlas EPS specializes in manufacturing quality expanded polystyrene insulation for a wide range of products, including recreational vehicles, garage and pedestrian doors, sunroom panels and many other interior and exterior construction applications.

Manufacturing world-class products is just part of the Atlas EPS commitment. Our dedicated Engineering Department and Quality Assurance Group will work with you to develop customized product designs to meet your exact requirements—all at a competitive price.

With plants strategically located across the U.S. and in Mexico, Atlas EPS is well-positioned to deliver the products you need on time, wherever they're needed, no matter how large your project.

Whether you're a residential builder, a commercial contractor or both, you can count on Atlas EPS to meet all your project requirements with viable and innovative product solutions.

ACROSS-THE-BOARD SUPPORT

- Knowledgeable and reliable customer support team ready to provide assistance whenever needed
- Nationwide network of state-of-the-art manufacturing facilities
- Customer orders via EDI; also orders built from client demand directly from ERP system
- Technical assistance with building codes, inspectors, energy bill compliance, product approvals
- Engineering support to design complex shapes or roof take-offs



SPECIFY THE ORANGE. SUPPORT THE GREEN.

As a pioneer in the manufacture of EPS insulation without environmentally harmful blowing agents, Atlas EPS continues to develop “green,” innovative insulation products that are energy-efficient and environmentally sustainable.

ThermalStar® Rigid Foam Insulation epitomizes our commitment to the environment. ThermalStar® Recycleboard insulation is made from 100% recycled and recovered resin. Unlike XPS foam insulation products, ThermalStar® contains no CFCs, HCFCs or VOCs, and is free of hazardous outgassing agents. Durable, yet lightweight, ThermalStar® cuts easily and installs with minimal waste.

Atlas EPS products are third-party tested and certified/listed with ASTM, ICC, ONNCCE, Underwriters Laboratories and Factory Mutual.

Our environmental stewardship extends to our manufacturing processes, as well. Each Atlas EPS plant serves as a recycling center to keep useful materials out of landfills by processing construction tear-offs.

FREE OF CFCS, HCFCs, VOCs

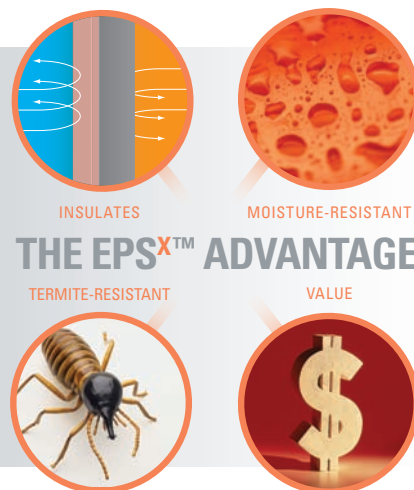
- Contains no chlorofluorocarbons, hydrofluorocarbons or volatile organic compounds
- HCFC-free “green” polystyrene
- Does not contain ozone-damaging, environmentally hazardous or unsafe outgassing agents
- Products contribute to USGBC LEED-NC v2.2 credits, including Sustainable Sites, Energy & Atmosphere and Materials & Resources
- Recyclable material. Visit www.epspackaging.org to locate a nearby drop-off location



THERMALSTAR® RIGID FOAM INSULATION

As a construction specifier, you know that ordinary just won't do when it comes to specifying building materials. You want extraordinary performance, durability and value from the products that will help enhance your reputation.

Introducing ThermalStar® Rigid Foam Insulation manufactured with proprietary EPS^{XTM} Technology. With its distinctive orange color, ThermalStar® Rigid Foam Insulation stands out as an innovative solution for all your below-grade and sheathing installations.



IT'S ORANGE, OR IT'S ORDINARY.

What sets ThermalStar® Rigid Foam Insulation apart? Outstanding performance and exceptional value. ThermalStar® Rigid Foam Insulation maintains its superior thermal and mechanical properties over time—including R-value and moisture resistance—providing long-term stability and protecting your installation for years to come. All at a more affordable price than competitive XPS foam products!

For performance you can trust and value you'll appreciate, specify ThermalStar® Rigid Foam Insulation for your next project.

ThermalStar®
X-Grade Insulation

AFTER ASTM C1512 ENVIRONMENTAL CYCLING

EPS TYPE	COMPRESSIVE STRENGTH, PSI	R-VALUE, F-ft ² -h/BTU	MOISTURE CONTENT, VOLUME, %
I	13.7	3.7	2.7
II	21.6	4.0	1.7
IX	32.0	4.4	1.6

From EPS Below-Grade Series 102, August 2008 <http://www.epsmolders.org/>

ASTM C1512 was specifically developed to evaluate building insulation under exposure to moisture and freeze-thaw cycles and is not applicable to concrete and other materials and applications which are inappropriate and unsuitable. (From EPSMA Below-Grade Series 102, August 2008.)

EPS[™] TECHNOLOGY EXPANDS THE LIFE OF EXPANDED POLYSTYRENE

Our proprietary EPS[™] Technology combines the strength and durability of expanded polystyrene with the natural moisture-resistant properties of wax to create a more breathable, longer-lasting thermal barrier in all applications.

- Polystyrene/wax matrix prevents R-value decay caused by trapped moisture
- Establishes a vapor-permeable barrier to prevent rotting caused by prolonged exposure to moisture
- Includes a proven, code-approved termite preservative for installation in all climates and applications
- Covered by a 20-year R-value warranty and backed by an industry leader

PROPRIETARY MATRIX CONSTRUCTION

Moisture penetration is the #1 threat to the integrity of your structure. The proprietary ThermalStar[®] insulation polystyrene/wax matrix forms a natural barrier against moisture and prevents R-value decay that can compromise XPS foam insulation. That's because each ThermalStar[®] bead consists of tens of thousands of polystyrene microcells that trap air, allowing any moisture in the matrix outside to quickly evaporate.



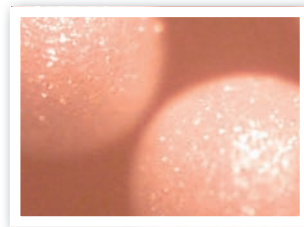
LONG-LASTING WATER RESISTANCE

Unlike XPS products, ThermalStar[®] insulation is a “breathable” material that does not become waterlogged over time, ensuring long-term performance. In fact, 15-year comparative studies of actual field applications of below-grade insulation show that EPS foam insulation—the basis for EPS[™] Technology—is unequalled for *retaining* R-value.



INTEGRATED TERMITE RESISTANCE

As a contractor, you've seen the damage termites can do to untreated building materials. With ThermalStar[®] foam insulation, the termiticide is applied during the manufacturing process, not after. This results in the termiticide being evenly dispersed throughout the polystyrene/wax matrix, forming an impenetrable barrier to prevent termites from burrowing into the core and compromising performance.



THERMALSTAR® INSULATION

BELOW-GRADE RIGID FOAM APPLICATIONS

For exceptional, long-lasting performance in below-grade applications, no EPS or XPS competitive product digs deeper than ThermalStar®. With its outstanding thermal and physical properties, durable ThermalStar® EPS™ protects foundation walls or slabs during backfilling and creates a superior barrier against damaging moisture.

X-GRADE 13, 15, 25, 40

Below-Grade Insulation – vertical on foundation walls, under slab

- Compressive Strength – 13, 15, 25, 40 psi
- R-value – R3, 5, 10, 15, 20, 25, or specify thickness 1/2" to 32"
- Field-tested and code-approved termite resistance
- Size – 48" x 96" standard, or specify
- Scored for easily snapping into 16" or 24" wide panels

BELOW-GRADE APPLICATIONS

ThermalStar® 100% recycled below-grade is a great choice for value-conscious buyers with moderate R-value requirements for vertical installation on foundation walls or under slabs.

RECYCLEBOARD—SHEETS & FANFOLD

Below-Grade Protection – vertical on foundation walls, under slab

- Compressive Strength – 10 psi
- R-value – nominal R1.5 (3/8" thick)
- 100% recycled and recovered resin
- Durable polymer facers both sides
- Size – 48" x 50' standard fanfold, or specify sheet size

SHEATHING APPLICATIONS

Sheathing provides the last line of defense against the elements in a wide variety of exterior, interior and cavity wall applications. Versatile, lightweight ThermalStar® installs easily and offers higher, long-term R-value and exceptional moisture protection and termite resistance.

STACCATO EIFS

Exterior Insulation Finishing System Foam

- Compressive Strength – 10 psi
- R-value – R3, 5, 10, or specify thickness 1/2" to 6"
- Enhanced dimensional curing
- 24" x 48" standard, or specify

STACCATO T&G15, T&G25

Residential Sheathing Insulation – designed for one-coat stucco

- Compressive Strength – 15, 25 psi
- R-value – R3, 5, 10, or specify thickness 1/2" to 3"
- Field-tested and code-approved termite resistance
- Size – 48" x 96" standard, or specify

SIDING UNDERLAYMENT—SHEETS & FANFOLD

Polymer-faced Sheathing – vertical over exterior wall

- Compressive Strength – 10 psi
- R-value – R2, 5, 10, or specify thickness 1/2" to 3"
- Durable polymer facers both sides
- Size – 48" x 96" standard, or specify
- Sheets may be taped with ThermalStar® 007 tape for weather-resistive barrier
- Fanfold (48" x 50') available for insulating exterior of existing walls



ROOFING APPLICATIONS

Conscientious builders demand products that reduce energy consumption, while creating a more comfortable living environment for the building's occupants. With its proven physical properties, including long-term thermal retention, ThermalStar® ensures your commercial roofing system will be as comfortable inside as it is durable outside. Its light weight makes it easy to hoist, handle and install for labor-saving economy. Apply ThermalStar® in single or multiple layers to meet your particular requirements.

X-PRO 13, 15, 25, 40

Commercial Roofing – Vegetative Roof System

- Compressive Strength – 13, 15, 25, 40 psi
- R-value – R3, 5, 10, or specify thickness 1/2" to 32"
- Drainage – specify taper dimension or flat
- Size – 48" x 48" standard, or specify

CG-PRO

Commercial Roofing – Standing Seam Roof

- Compressive Strength – 15 psi
- R-value – R4, 5, 10, or specify thickness 1" to 3"
- CNC cut-to-fit standing seam metal roof, with Atlas FR10 slipsheet adhered 1 side
- Size – 48" x 96" standard, or specify

CG 13, 15, 25

Commercial Roofing – no cover board

- Compressive Strength – 13, 15, 25 psi
- R-value – R3, 5, 10, or specify thickness 1/2" to 3"
- Flat, with Atlas FR10 slipsheet adhered 1 side
- Size – 48" x 48" standard, or specify

TS 10, 13, 15, 25, 40

Commercial Roofing

- Compressive Strength – 10, 13, 15, 25, 40 psi
- R-value – R3, 5, 10, or specify thickness 1/2" to 32"
- Drainage – specify taper dimension or flat
- Size – 48" x 48" standard, or specify

ROOFING UNDERLAYMENT 15, 20— SHEETS & FANFOLD

Commercial Roofing – RECOVER sheet

- Compressive Strength – 15, 20 psi
- R-value – R2, 5, 10, or specify thickness 3/8" to 3"
- Durable polymer facers both sides
- Chemically resistant to PVC membranes – approved by PVC systems
- Size – 48" x 96" standard sheets, or 48" x 50' fanfold

Thanks to proprietary EPS™ Technology that delivers unique moisture protection, ThermalStar® panels provide an excellent substrate for vegetative roof systems.



EXTENSIVE CODE APPROVALS

- CAN/ULC Listed – S102.2, S701 – See UL R16529.B0ZCC
- UL Listed – 28PO, R16529
- ASTM C578
- Meets HUD/FHA Use of Materials Bulletin No. 71A
- Federal Specification HH-I-1972
- Section 07210 – Building Insulation
- International Residential Code (IRC), International Building Code (IBC), BOCA National Building Code (NBBC), Universal Building Code (UBC), Standard Building Code (SBC), International Energy Conservation Code (IECC) – see ICC-ES report ESR-1962

ATLAS EPS THERMALSTAR® TYPICAL PROPERTIES

Compressive Strength @ 10%	8 psi	10	13	15	25	40	50
R-value @ 75F	3.2 / inch	3.9	3.9	4.2	4.4	4.4	4.4
Typical Applications	Utility Void Fill Beadboard Protection	Utility EIFS Poly Faced Roof	Utility XPS Sub Sheathing Roof	Utility XPS Sub Sheathing Roof	Utility XPS Sub Sheathing Roof	Below Slab XPS Sub	Below Slab XPS Sub
ASTM C578 Classification	Type XI	Type I	Type VIII	Type II	Type IX	Type XIV	Type XV
Atlas EPS Order Code	100	101	121	151	201	300	301
R-value @ 40F	3.5 / inch	4.2	4.4	4.6	4.7	4.7	4.7
R-value @ 25F	3.9 / inch	4.4	4.6	4.8	4.9	5.0	5.0
Compressive @ 1% (D6817)	2.9 psi	4.4	7.0	8.8	11.0	15.0	19.0
Flexural Strength	18 psi	29	35	42	55	75	95
Tensile Strength	18 psi	26	33	40	55	70	90
Shear Strength	13 psi	20	22	26	38	XXX	XXX
Surface Burning	US via E84 = Flame Spread 20, Smoke Developed 400 Canada via CAN/ULC S102.2 = Flame Spread 290, Smoke Developed > 500						
Mold Resistance	NO growth of mold as tested via ASTM G21, D3273, and C1338						
Freeze-Thaw Exposure	NO degradation of Thermal Resistance, Dimensional Stability, or Strength after ASTM C1512 Moisture / Temperature Cycling Test for Insulation						
15-year Below-Grade	NO degradation of Thermal Resistance, Dimensional Stability, or Physical Strength after 15-year foundation exposure test						

*The physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation. This data is offered as a service to our customers and is subject to change. All information can be confirmed by contacting the Atlas EPS Technical Department.

COMPATIBILITY OF ATLAS EPS WITH COMMON CHEMICALS

Inorganic Acids (Muriatic, Sulfuric, Boric Acid)	Excellent
Organic Acids (Carbolic, Citric, Acetic Acid)	Good
Bases (Sodium Hydroxide, Potassium Hydroxide, Ammonia)	Excellent
Alcohols (Methanol, Ethanol, Isopropyl Alcohol)	Good
Beer, Tea, Coffee, Carbonated Soda, Water, Fruit Juice	Excellent
Household Liquid Spray Insecticides (non-aqueous)	Poor
Cement	Excellent
MEK, Methylene Chloride, Acetone	Poor
Antifreeze (Ethylene Glycol – Green, Propylene Glycol – Orange)	Excellent
Hydrocarbons (Hoxane, Gasoline, Diesel, Kerosene)	Poor
Mineral Oil	Excellent
Other Oils (Corn, Motor, Palm, Coconut Oil)	Good
Agricultural (Manure, Food, Urine, Soil, Fertilizer)	Excellent
Formaldehyde, Turpentine, Chloroform, Naphtha	Poor
Salts (Ammonium, Ferrous, Sodium Chloride, Sulfur)	Excellent
MDI-based Adhesives (Gorilla Glue, Fast-Tac, Dow Great Stuff)	Good
Bleach, Detergents, Borax	Excellent
Cured Mastic, Construction Adhesive, Hardened Asphalt	Good

Excellent = No degradation, no effect from exposure
 Good = Some effect from exposure, but not significant for product performance
 Poor = Significant degradation affecting performance, up to completely dissolving product
 This table is a guide only — consult Atlas Technical Services for specific chemical design questions.

ThermalStar®
X-Grade Insulation



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