

hcfc-free "green" expanded polystyrene insulation

EXPANDED POLYSTYRENE FOR COMMERCIAL BUILDING APPLICATIONS



www.FalconFoam.com

Commercial Building Applications

Expanded Polystyrene Insulation



Falcon Foam leads the commercial building industry with products that are environmentally friendly, while maintaining high LTRR values. Whether it's roof or walls, flat or tapered, or even road construction, Falcon Foam has the right product for your needs. Our nationwide presence means you'll always get your full order on time, every time.

Tapered Polystyrene Insulation

4

Eliminate ponding water concerns with any one of Falcon's tapered EPS products. Falcon Foam Tapered Roof Insulation is available with perlite, fiberboard, and foil slip-sheets laminated to one or both sides. These composite boards provide greater flexibility in complying with today's varied roof system requirements.

Single Ply Membrane Systems

BUR & Modified Bitumen

Interior Insulation

Sub-flooring Applications

Metal Roof Systems



Applications

Flat Polystyrene Insulation

1 With Falcon Foam EPS insulation, you can cost-effectively insulate any type of flat roof and be certain of quality performance. Use it on single-ply membrane roofs — loose-laid ballasted, fully-adhered or mechanically-fastened — or with a cover board and built-up roofing (BUR) systems where it makes an ideal substrate for asphalt and bitumen. The light weight of Falcon Foam roof insulation makes it easy to hoist, handle and install for labor-saving economy. It can be applied in either single or multiple layers to meet your particular requirements. And you can cut it quickly and easily with common job site tools.

Exterior Polystyrene Sheathing

3 Falcon Foam Insulation is a cost-effective insulating substrate for Exterior Insulation and Finish Systems (EIFS). Compatible with virtually all exterior insulation systems, Falcon Foam Insulation can be custom cut to meet unique architectural designs, adding architectural interest while substantially increasing the thermal efficiency of the structure. High R-value, moisture resistance and ease of handling make Falcon Foam Insulation the underlying quality in new construction and retrofit applications.

Polystyrene for Exterior Applications

2 ThermalStar® Offers Higher Insulating Value In a Minimal Space, While Providing a Smooth, Level Surface for Siding Application.

Choose Plain, Poly or Foil facing. Plain (unfaced) ThermalStar® Sheathing is the most economical foam insulation available. Builders, however, show a preference for the poly film facings on both sides. The film facer creates a rugged and durable insulation board that stands up better to job site handling and abuse.

The foilized facings offer a reflective surface. When used in conjunction with a 3/4" airspace, additional R-value of up to 2.77 can be achieved. Foilized facing can be provided on one or both sides of the product.

Exterior Sheathing
- Insulation for EIFS

Exterior Sheathing
- ThermalStar

Flat Polystyrene

1 EPS INSULATION

Falcon Foam Flat Roof Insulation is suitable for use in single-ply, modified bitumen and conventional Built-Up Roofing systems. Systems may be loose laid/ballasted, fully adhered or mechanically attached.

1 EPS KRAFT-BACKED FOIL

Falcon Foam Roof Insulation can be factory laminated with a Kraft-backed foil separator sheet. This composite board provides greater flexibility in complying with today's varied roof system requirements. It should be noted that this system requires the insulation to be mechanically fastened to the roof deck according to the membrane manufacturer's recommendations.

3 EPS FLAT INSULATION-EIFS

Falcon Foam for Exterior Insulation and Finish Systems (EIFS) is a cost-effective insulating substrate for exterior wall finishes. Compatible with virtually all exterior insulation systems, Falcon Foam EIFS Flat Insulation is light weight, easy to handle, and moisture resistant. Use of Falcon Foam EIFS Flat Insulation will substantially increase the thermal efficiency of the building structure.

4 TAPERED EPS ROOF INSULATION

Falcon Foam Tapered Roof Insulation is an engineered EPS roof insulation system designed to promote positive water drainage for all types of roof decks. Falcon Foam is suitable for use with single-ply membranes, modified bitumen, and conventional Built-Up Roofing systems.

Tapered Polystyrene

1 PRO-FOIL™

Specifically designed for industrial and commercial building roofing materials, PRO-FOIL™ is easily applied over an existing metal deck roof, fitting precisely on the fluted deck area and creating a level surface for membrane installation. PRO-FOIL™ offers outstanding thermal efficiency and superior moisture resistance

2 PLAIN SHEATHING

Conventional frame-built homes can leave up to 20% of the wall area uninsulated. Falcon Foam Plain Sheathing can cover the entire wall area with a cost-effective thermal barrier. The result is a significant increase in wall "R" rating for increased energy efficiency and occupant comfort.

3 SPECIAL SHAPES

Falcon Foam Special Shapes for Exterior Insulation and Finish Systems (EIFS) are a cost-effective solution for exterior wall enhancements. Compatible with virtually all exterior insulation systems, Falcon Foam Special Shapes are custom cut to meet unique architectural designs, adding architectural interest.

4 TAPERED EPS W/FIBERBOARD

Falcon Foam Tapered Roof Insulation can be factory laminated with a Fiberboard separator sheet on one or both sides. This composite board provides greater flexibility in complying with today's roof system requirements. It should be noted that this system requires the insulation to be mechanically fastened to the roof deck according to the membrane manufacturer's recommendations.

1 FIBERBOARD

Falcon Foam flat EPS insulation can be laminated with a FIBERBOARD slipsheet on one or both sides. This composite board provides greater flexibility in complying with today's varied roof system requirements.

2 THERMALSTAR® LAMINATED SHEATHING

ThermalStar® offers insulating value in a minimal space, while providing a smooth, level surface for siding application. Choose clear or foil facing. The foiled facings offer a reflective surface, which, when used in conjunction with a 3/4" airspace, can provide an additional r-value up to 2.77. Foiled facing can be provided on one or both sides of the product.

3 MOLDED WATER MANAGEMENT BOARD

Falcon Foam Molded Water Management Board is a cost-effective insulating substrate for exterior wall finishes. Compatible with virtually all exterior insulation systems, Falcon Foam Molded Water Management Board is manufactured with a unique diamond-patterned profile to provide drainage between the EIFS system and the building substrate.

4 TAPERED EPS W/PERLITE

Falcon Foam Tapered Roof Insulation can be factory laminated with a Perlite separator sheet on one or both sides. This composite board provides greater flexibility in complying with today's roof system requirements. It should be noted that this system requires the insulation to be mechanically fastened to the roof deck according to the membrane manufacturer's recommendations.

1 PERLITE

Falcon Foam flat EPS insulation can be laminated with a PERLITE slipsheet on one or both sides. This composite board provides greater flexibility in complying with today's varied roof system requirements.

2 THERMALSTAR® FANFOLD

Offers the same advantages as ThermalStar® Sheathing, plus ThermalStar® Fanfold hinges are cut, not crimped, giving the installer a level foundation which is key for a smooth siding job. The perforated poly film facers permit the EPS core to breath, allowing moisture to escape and avoid moisture accumulation within the structure's walls.

3 FABRICATED WATER MANAGEMENT BOARD

Falcon Foam Fabricated Water Management Board is a cost-effective insulating substrate for exterior wall finishes. Compatible with virtually all exterior insulation systems, Falcon Foam Fabricated Water Management Board is manufactured with drainage channels per EIFS manufacturer's requirements to provide drainage between the EIFS system and the building substrate.

4 TAPERED EPS W/KRAFT-BACKED FOIL

Falcon Foam Tapered Roof Insulation can be factory laminated with a Kraft-Backed Foil separator sheet on one or both sides. This composite board provides greater flexibility in complying with today's roof system requirements. It should be noted that this system requires the insulation to be mechanically fastened to the roof deck according to the membrane manufacturer's recommendations.

Warranty



20 YEAR LIMITED THERMAL WARRANTY

In response to valid concerns of building designers regarding thermal efficiency of various construction assemblies and the long-term insulating value of roof insulation, Falcon Foam (a division of Atlas Roofing Corporation) offers a 20-year, limited thermal warranty. The Falcon Foam EPS (Expanded Polystyrene) Limited Thermal Warranty places Falcon Foam EPS (Expanded Polystyrene) products above all others and supports the building owner, designer and contractor by backing up thermal performance. This warranty is available to the building owner at the time the building is completed and is transferable to any subsequent owner for the duration of the 20-year period.

Features & Benefits

- Outstanding thermal efficiency
- Moisture resistant for lifelong performance
- Lightweight — for easier hoisting, handling and installation
- Environmental compatibility: contains no CFCs or HCFCs and is recyclable
- Available in a variety of panel sizes and thicknesses
- Creates thermal envelope for maximum heat/cooling efficiency
- One of the most economical sheathing solutions available
- Fanfold cut hinges assure flat, level surface without trimming
- Facings available include plain, poly and foil



GREEN ASPECTS OF EXPANDED POLYSTYRENE



Falcon Foam leads the industry in the development of environmentally friendly Expanded Polystyrene (EPS) insulation products. Expanded Polystyrene is made without ozone depleting chemicals like CFCs or HCFCs. Falcon Foam Expanded Polystyrene insulation is 100% recyclable. EPS production uses less than 0.1% of this country's petroleum. The raw material Falcon Foam uses to manufacture EPS insulation also incorporates recycled material.



Falcon Foam® Specifications

Section 1; General

1.1 System description — Falcon Foam Tapered Roof Insulation is EPS (molded expanded polystyrene) roof insulation suitable for use in single-ply membranes, modified bitumens, and conventional BUR roof systems either loose laid and ballasted, adhered or mechanically attached. Falcon Foam Tapered Roof Insulation is a custom designed and factory cut, labeled and packaged system designed for positive drainage for any roof deck. Shop drawings showing the placement of specially marked tapered panels are provided with all Falcon Foam Tapered Roof Insulation systems.

1.2 Quality assurance — The roof insulation system will be a Falcon Foam Tapered Roof Insulation system manufactured by Falcon Foam. The manufacturer will have a third party quality assurance program complying with applicable building code requirements. The manufacturer must be capable of supplying a 20-year thermal performance warranty when requested.

1.3 References — Falcon Foam Tapered Roof Insulation must comply with ASTM C 578 (superseding Federal Specification HH-I-524C) and all major model building codes.

1.4 Submittals — Falcon Foam will submit customized shop drawings for approval of all tapered systems. Falcon Foam will provide manufacturer's literature describing material and recommended practices.

Section 2; Products

2.1 Materials — All Falcon Foam Tapered Roof Insulation must comply with ASTM C 578, Type I; 0.90 pcf ____, Type VIII; 1.15 pcf ____, Type II; 1.35

pcf ____, or Type IX; 1.80 pcf ____. Thickness shall be ____ inches. R-value shall be ____. Falcon Foam Tapered Roof Insulation shall have a minimum thickness of ____. The tapered system shall be factory fabricated with a slope of ____. The tapered system shall provide an average R-value of ____. All Falcon Foam Tapered Roof Insulation panels will be clearly marked to correspond with Falcon Foam provided shop drawing. Related Materials: Coverboards, when required, shall be a minimum 1/2" wood fiberboard meeting ASTM C 208 and ASTM C 209, or a minimum of 1/2" perlite meeting ASTM C 728-82. In metal deck construction, a thermal barrier such as 1/2" gypsum or 3/4" perlite may be required. Local building codes must be followed regarding the use of EPS in metal deck construction.

Section 3; Execution

3.1 Preparation — Falcon Foam Tapered Roof Insulation must be applied to a sound, clean and moisture-free deck surface. The deck shall be sufficiently rigid to support the roofers and mechanical equipment without deflection that will strain or otherwise rupture any of the roofing components or deform the deck.

3.2 Installation — Apply Falcon Foam Tapered Roof Insulation in accordance with roof insulation catalog recommendations or as required by local building codes. The decision to use a vapor retarder and the details thereof rest solely with the building architect, designer, building owner or their designated representative.

Applications to Deck: (For built-up roofs, modified bitumen systems and fully adhered single-ply

systems.)

a. Concrete Deck: The primed deck shall be solidly mopped with steep asphalt at an application rate of 25 lbs./square. Allow to cool to 225°F and embed the EPS roof insulation. Each EPS insulation board shall be 'walked in' as it is embedded in the hot asphalt.

b. Steel Deck: The thermal barrier (if required) shall be mechanically fastened to the steel deck. The thermal barrier shall be solidly mopped with steep asphalt at a rate of 25 lbs./square. Allow it to cool to 225°F – 250°F and embed the EPS roof insulation. Each EPS insulation board shall be 'walked in' as it is embedded in the hot asphalt.

Never apply asphalt to any polystyrene insulation at a temperature that exceeds 250°F. Do not apply flame directly to EPS when installing a modified bitumen roof system.

3.3 Limitations — Falcon Foam EPS is manufactured with a fire retardant; however, it will burn upon exposure to an adequate source of heat or flame. EPS should be kept away from any open flame or source of ignition. Do not install or use EPS with coal tar pitch or highly solvent extended mastics without adequate separation.

3.4 Protection — Installed insulation shall not be left exposed to the weather. Install no more insulation than can be completely covered by the complete roofing system on the same day. Installed insulation that has become wet shall be removed and replaced with dry insulation. Protect installed roof insulation and membrane from roof traffic damage.

Falcon Foam Typical Physical Properties

Properties	Units	ASTM Test	ASTM Designations						
			Type XI	Type I	Type VIII	Type II	Type IX	Type XIV	NA
ASTM Density	pcf (min)	C 303 or D 1622	0.70	0.90	1.15	1.35	1.80	2.40	2.70
Common Designation	pcf		0.70	1.00	1.25	1.50	2.00	2.40	3.00
Thermal Resistance Values	at 25°	C 177 or C 518	3.45	4.20	4.40	4.60	4.80	4.80	NA
	at 40°	C 177 or C 518	3.30	4.00	4.20	4.40	4.60	4.60	4.70
	at 75°	C 177 or C 518	3.10	3.60	3.80	4.00	4.20	4.20	4.30
Compressive 10% Deformation	psi	D1621	5	10	13	15	25	40	NA
Flexural Strength	psi	C203	10	25	30	35	50	60	NA



GreenSpec 4 Approved

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