

Product Data Sheet



Energy-Saving, Moisture Resistant XPS Insulation

For poultry houses and other agricultural construction

ASTM C578 Type IV, 25 psi minimum

Description

FOAMULAR[®] AGTEK extruded polystyrene (XPS) rigid foam insulation provides cost-efficient insulation for use in animal confinement, crop containment and machinery storage facilities. A well-insulated poultry house that provides a constant, controlled environment can add significantly to profitability. FOAMULAR[®] insulation offers distinct benefits that meet this profit aim by creating an atmosphere that can help reduce animal stress and mortality. Result: maximum productivity. AGTEK XPS insulation increases efficiency in both installation and maintenance which can result in significant savings.

FOAMULAR[®] insulation provides stable thermal properties that are of great value throughout the year. In warm months, when good ventilation is needed to provide fresh air and control

excess heat, humidity and odor, the material's insulating effectiveness helps reduce heat gain from solar loading, thereby increasing poultry house yield. In the winter, FOAMULAR[®] insulation reduces heating requirements and help keep a stable poultry house temperature.

FOAMULAR[®] insulation can be applied to girts in sidewall construction or purlins in roof construction, on the interior of either wood or steel-framed buildings. FOAMULAR[®] also works well in a drop ceiling configuration. Installed on the underside of the bottom cord of roof trusses, it is more durable than plastic films and is capable of protecting and supporting the weight of blown insulation.

FOAMULAR[®] extruded polystyrene insulation is economical, easy to install and assists in saving energy and increasing productivity. The material is impervious to moisture and is strong enough to resist damage from high-pressure wash downs while it maintains excellent insulating properties for the life of the building.

Key Features

- Excellent long-term stable insulating performance with an R-value¹ of R-5 per inch
- Total washability for easy maintenance
- Tight-fitting edges that help prevent energy leakage
- Special extended-length sizes for ease of construction

- Resistant to decay, mildew and fungus growth
- Exceptional moisture resistance, long-term durability
- Limited lifetime warranty²— maintains 90% of R-value and covers all ASTM C578 properties
- The only XPS foam to be GREENGUARD Children & Schools CertifiedSM
- The only XPS foam with certified recycled content— certified by Scientific Certification Systems (SCS) to contain a minimum 20% recycled content
- Will not corrode, rot or support mold growth
- Zero ozone depletion potential with 70% less global warming potential than our previous formula
- Reusable
- Lightweight, durable rigid foam panels are easy to handle and install
- Easy to saw, cut or score

Technical Information

This product is combustible. A protective barrier or thermal barrier is required as specified in the appropriate building code. For additional information, consult MSDS or contact Owens Corning World Headquarters at 1-800-GET-PINK[®].



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All construction should be evaluated for the necessity to provide vapor retarders. See current ASHRAE Handbook of Fundamentals.

FOAMULAR® XPS insulation is a non-structural material and must be installed on framing which is independently braced and structurally adequate to meet required construction and service loading conditions.

FOAMULAR® insulation can be exposed to the exterior during normal construction cycles. During that time some fading of color may begin due to UV exposure, and, if exposed for extended periods of time, some degradation or “dusting” of the polystyrene surface may begin. It is best if the product is covered within 60 days to minimize degradation. Once covered, the deterioration stops, and damage is limited to the thin top surface layers of cells. Cells below are generally unharmed and still useful insulation.

Standards, Codes Compliance

- Meets ASTM C578 Type IV, 25 psi minimum
- UL Classified. A copy of UL Classification Certificate U-197 is available at www.foamular.com
- See ICC-ES Evaluation Report ESR-1061 at www.icc-es.org
- Meets California Quality Standards and HUD UM #71a
- Compliance verification by RADCO (AA-650)



Typical Physical Properties¹

FOAMULAR® AGTEK Insulation

Property	Test Method ²	Value
Thermal Resistance³ , R-Value (180 day) minimum, hr•ft ² •°F/Btu (RSI, °C•m ² /W) @ 75°F (24°C) mean temperature	ASTM C518	
1" Thickness		5.0 (0.88)
1½" Thickness		7.5 (1.32)
@ 40°F (4.4°C) mean temperature		
1" Thickness		5.4 (0.95)
1½" Thickness		8.1 (1.43)
Long Term Thermal Resistance , LTTR-Value ³ , minimum hr•ft ² •°F/Btu (RSI, °C•m ² /W) @ 75°F (24°C) mean temperature	CAN/ULC S770-03	
1" Thickness		5.0 (0.88)
1½" Thickness		7.5 (1.32)
Compressive Strength⁴ , minimum psi (kPa)	ASTM D1621	25 (172)
Flexural Strength⁵ , minimum psi (kPa)	ASTM C203	75 (517)
Water Absorption⁶ , maximum % by volume	ASTM C272	0.10
Water Vapor Permeance⁷ , maximum perm (ng/Pa•s•m ²)	ASTM E96	1.5 (86)
Dimensional Stability , maximum % linear change	ASTM D2126	2.0
Flame Spread^{8,9}	ASTM E84	5
Smoke Developed^{8,9,10}	ASTM E84	45-175
Oxygen Index⁸ , minimum % by volume	ASTM D2863	24
Service Temperature , maximum °F (°C)	—	165 (74)
Linear Coefficient of Thermal Expansion , in/in/°F (m/m/°C)	ASTM E228	3.5 × 10 ⁻⁵ (6.3 × 10 ⁻⁵)

1. Properties shown are representative values for 1" thick material, unless otherwise specified.
2. Modified as required to meet ASTM C578.
3. R means the resistance to heat flow; the higher the value, the greater the insulation power. This insulation must be installed properly to get the marked R-value. Follow the manufacturer's instructions carefully. If a manufacturer's fact sheet is not provided with the material shipment, request this and review it carefully. R-values vary depending on many factors including the mean temperature at which the test is conducted, and the age of the sample at the time of testing. Because rigid foam plastic insulation products are not all aged in accordance with the same standards, it is useful to publish comparison R-value data. The R-value for FOAMULAR® XPS insulation is provided from testing at two mean temperatures, 40°F and 75°F, and from two aging (conditioning) techniques, 180 day real-time aged (as mandated by ASTM C578) and a method of accelerated aging sometimes called "Long Term Thermal Resistance" (LTTR) per CAN/ULC S770-03. The R-value at 180 day real-time age and 75°F mean temperature is commonly used to compare products and is the value printed on the product.
4. Values at yield or 10% deflection, whichever occurs first.
5. Value at yield or 5%, whichever occurs first.
6. Data ranges from 0.00 to value shown due to the level of precision of the test method.
7. Water vapor permeance decreases as thickness increases.
8. These laboratory tests are not intended to describe the hazards presented by this material under actual fire conditions.
9. Data from Underwriters Laboratories Inc.® classified. See Classification Certificate U-197.
10. ASTM E84 is thickness-dependent, therefore a range of values is given.



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Product and Packaging Data

FOAMULAR® AGTEK Insulation

Material		Packaging	
Extruded polystyrene closed-cell foam panel with continuous skins on top and bottom surfaces		Shipped in poly-wrapped units with individually wrapped or banded bundles.	
Thickness (in)	Width (in)	Length (in)	Edges
1, 1½	48"	up to 348	Shiplap Edges on Long Edges, Square Edges on Short Edges

1. AGTEK products are made to order. Product availability and lead times vary by region and by product. Consult your local Owens Corning sales representative for availability and lead times.

Certifications and Sustainable Features of FOAMULAR® XPS insulation

- FOAMULAR® XPS insulation is reusable
- FOAMULAR® XPS insulation is made with a zero ozone depletion formula
- Certified by Scientific Certification Systems to contain a minimum of 20% pre-consumer recycled polystyrene
- Certified to meet indoor air quality standards under the stringent GREENGUARD Indoor Air Quality Certification ProgramSM, and the GREENGUARD Children & Schools Certification ProgramSM.
- Approved under the National Association of Home Builders (NAHB) Research Center Green Seal of Approval.
- Utilizing FOAMULAR® XPS insulation can help achieve green building certifications including the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) certification
- FOAMULAR® XPS insulation may qualify for The Buy American provision of the American Recovery and Reinvestment Act (ARRA)

Environmental and Sustainability

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services. Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives. More information can be found at www.sustainability.owenscorning.com.

Warranty

FOAMULAR® XPS insulation limited lifetime warranty maintains 90% of its R-value for the lifetime of the building and covers all ASTM C578 properties. See actual warranty for complete details, limitations and requirements at www.foamular.com or www.owenscorningcommercial.com.

Notes

1. R means the resistance to heat flow; the higher the R-value, the greater the insulating power.
2. See actual warranty for complete details, limitations and requirements.

All products described here may not be available in all geographic markets. Consult your local sales office representative for more information.

For more information on the Owens Corning family of building products, contact your Owens Corning dealer, call 1-800-GET-PINK®, or access our web sites: www.foamular.com and www.owenscorning.com.



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This NAHB Research Center Green Approved mark is your assurance that a product is eligible for points toward National Green Building Certification. Visit www.GreenApprovedProducts.com for details.

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