

DuPont™ XENERGY™ Rigid Insulation

FEATURES/BENEFITS

Description

XENERGY™ Rigid Insulation is a closed cell high-performance core material. DuPont's proprietary extrusion process enables precise control of parameters such as density, cell size and cell orientation. This yields foam boards that can stand up to the most demanding composite panel applications. **XENERGY™ Rigid Insulation** is supplied in sheets that have been carefully engineered and sanded to precise tolerances for an exceptional bonding surface.

XENERGY™ Rigid Insulation is customized for use in Exterior Insulation Finishing Systems (EIFS). The closed-cell structure of **XENERGY™ Rigid Insulation** prevents the foam from absorbing water, which helps maintain panel integrity and insulating properties in low temperature applications and other environments with high humidity conditions.

PHYSICAL PROPERTIES

XENERGY™ Rigid Insulation exhibits the properties and characteristics indicated in Table 2 when tested as represented. Like all cellular polymers, this product will degrade upon high heat or prolonged exposure to sunlight. **XENERGY™ Rigid Insulation** should not be used above 165°F surface temperature under any circumstances to maintain product integrity and system performance. A covering may be used to block ultraviolet radiation and prevent degradation. Other coverings to protect the foam from the elements and to meet applicable fire regulations may also be required. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

Environmental Data

XENERGY™ Rigid Insulation is hydrochlorofluorocarbon (HCFC) free with zero ozone-depletion potential.

TABLE 1: Sizes and Edge Treatments for XENERGY™ Rigid Insulation

Nominal Board Thickness ⁽¹⁾ (in.)	Board Length, in.	Board Width, in.	Edge Treatment
Available in 1", 1.5", 2", 3", 4"	Nominal 96"	24"	Straight Edge

¹ Not all product sizes are available in all regions.

TABLE 2: Typical Physical Properties of XENERGY™ Rigid Insulation

Property and Test Method	Value ⁽¹⁾
Maximum Recommended Use Temperature (°F)	165
Density, ASTM D1622, lb/ft ³	1.5
Compressive Strength ⁽¹⁾ , ASTM D1621, psi, min., vertical	20
Tensile Strength, ASTM D1623, lb/in ² , min., vertical	50
Shear Strength, ASTM C273, lb/in ² , min.	25
Shear Modulus, ASTM C273, lb/in ² , min.	300
Flexural Strength, ASTM C203, lb/in ² , min., extruded	40
Flexural Modulus, ASTM C203, lb/in ² , min., extruded	1,500
Water Absorption, ASTM C272, % by vol., max.	0.3
Water Vapor Permeance ⁽⁴⁾ , ASTM E96, perm, max.	1.5
Coefficient of Linear Thermal Expansion (CLTE), ASTM D696, in/in/°F	.000035
Impact Resistance, ASTM 2486, in-lbs, Using Standard Plus® Mesh	76
R-Value ⁽²⁾ per inch (25 mm), ASTM C518, °F·ft ² ·h/Btu, 180 days aged @ 75°F (24°C) min.	5.0
Surface Burning Characteristics ⁽³⁾ , ASTM E84, Flame Spread Index Smoke Developed Index	15 165

⁽¹⁾ Vertical compressive strength measured at 10 percent deformation or at yield, whichever occurs first. Adequate design safety factors should be used to prevent long-term creep. Contact DuPont for design recommendations. When placing a load over the surface of the product, the compressive strength should be multiplied by 0.52 to account for the surface area lost due to channels cut into the foam surface.

⁽²⁾ R means resistance to heat flow. The higher the R-value, the greater the insulating power.

⁽³⁾ This numerical flame spread rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

⁽⁴⁾ Based on 1" thickness

Fire Information

XNERGY™ Rigid Insulation is combustible; protect from high heat sources. A protective barrier or thermal barrier may be required as specified in the appropriate building code. For more information, consult MSDS, call DuPont at 1-866-583-2583 or contact your local building inspector.

TECHNICAL DATA

Applicable Standards

XNERGY™ Rigid Insulation complies with ASTM C578 Type X.

Code Compliances

XNERGY™ Rigid Insulation complies with the following codes:

- Meets IBC/IRC requirements for foam plastic insulation. See International Code Council evaluation report ICC-ES ESR 2142
- UL Classified, See Classification Certificate D369 Contact your DuPont sales representative or local authorities for state and local authorities for state and local building code requirements and related acceptance.

INSTALLATION

XNERGY™ Rigid Insulation is strong, yet lightweight and easy to fabricate into various sizes and shapes to meet specific design needs. **XNERGY™** should be installed per manufacturer's instructions for the complete EIFS assembly. Contact the manufacturer of your system for full details.

Availability

XNERGY™ Rigid Insulation is only available as part of a complete Exterior Insulation and Finishing System. For more information, call 1-800-232-2436.

Warranty

In the United States, a 50-year thermal limited warranty is available on **Styrofoam™ Brand Insulation** products 1.5 inches and greater. For thickness less than 1.5 inches, other warranties may apply. Warranties are available as described at www.building.dupont.com

Maintenance

Not applicable.

Technical Services

DuPont can provide technical information to help address questions when using **XNERGY™ Rigid Insulation**. Technical personnel are available at 1-866-583-2583.



**For more information visit
building.dupont.com
or call 1-866-583-2583**

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CAUTION: This product is combustible. Protect from high heat sources. A protective barrier or thermal barrier may be required as specified in the appropriate building code. For more information call the DuPont Contact Center at 866-583-2583 or contact your local building inspector. For emergencies contact Chemtrec 800-424-9300, CCN (Contract Number) 7442.

WARNING: Rigid foam insulation does not constitute a working walkable surface or qualify as a fall protection product.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplier including DuPont can give assurance that mold will not develop in any specific system.

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