

Neopor® HPE-150 Product Data Sheet

Innovation in Insulation
Enhanced with Graphite.

Why Builders Rely on Neopor® High Performance Insulation.

- Graphite-enhanced R-5 performance
- Meets International Residential Code (IRC) for Continuous Insulation (CI), Below Grade, Attics and Crawl Spaces
- Moisture-resistant and Vapor-open
- GREENGUARD Gold Indoor Air Quality
- Regional production and local availability.
- No R-value loss over time (LTTR)

Product Description.

Neopor HPE-150 is an Innovation in insulation product with a maximum R-value enhanced with graphite.

Neopor HPE-150 is a premium grade insulation manufactured to provide builders and contractors all the features and benefits inherent in a high quality insulation.

Applications.

- Exterior above and below grade insulation

Technical Data.

Code Compliances.

Neopor HPE-150 is manufactured under industry leading quality control programs monitored by ICC-ES and UL and further recognized in ICC-ES Evaluation Report 3463 and UL Evaluation Report UL ER5817-02.

Applicable Standards.

Neopor HPE-150 meets ASTM C578, Type II, "Standard Specification for Rigid Cellular Polystyrene Thermal Insulation". Applicable standards include:

- ASTM D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics

- ASTM C518 – Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- ASTM C203 – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
- ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials
- ASTM C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
- ASTM D2126 – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging

R-value.

Neopor HPE-150 has air in its closed cells and therefore has a stable R-value. Many other insulations use blowing agents that cause R-value loss and are harmful to the environment.

As temperatures drop, the R-value of Neopor HPE-150 increases significantly. Many other insulations lose R-value at low temperatures.

Innovation in Insulation.

Neopor® is an advanced rigid thermal insulation material available locally and world-wide that allows builders to achieve energy code while still meeting client budget expectations.

Installation.

Neopor HPE-150 boards are easy to handle, cut using a utility knife or serrated blade, and install.

Moisture Resistance.

Neopor HPE-150 is manufactured to resist moisture absorption in wetting conditions and release absorbed moisture quickly during drying periods, which means Neopor HPE-150 maintains R-value. The drying potential of Neopor HPE-150 sets it apart from other insulation materials.

Product Protection.

Neopor HPE-150 can be damaged by prolonged direct sunlight exposure or by reflected sunlight. Neopor HPE-150 must be protected during storage, transportation, and at the project with a light colored opaque material.

Please refer to the Neopor HPE-150 Handling Instructions.

Flame Retardants

Although flame retardants present in Neopor HPE-150 provide an important margin of safety, all Neopor HPE-150 products must be considered combustible.

A protective barrier or thermal barrier is required as specified in the appropriate building code.

Temperature Exposure.

Neopor HPE-150 is able to withstand the rigors of temperature cycling, assuring long-term performance. The maximum recommended long-term exposure temperature for Neopor HPE-150 is 165°F (74°C).

Termites.

Neopor High Performance Insulation can be manufactured with Termiticide.

Physical Properties of Neopor HPE-150.

Compressive Strength ^{1,2} @ 10% deformation, min. ASTM D1621		psi	15
R-value ¹ , Thermal Resistance, ASTM C518	40°F	°F·ft ² ·h/Btu	5.0
	75°F	°F·ft ² ·h/Btu	4.7
Density, Nominal ASTM C303		lb/ft ³	1.35
Flexural Strength ¹ , min. ASTM C203		psi	35
Water Vapor Permeance ¹ of 1.0 in. thickness, max., perm ASTM E96			3.1
Water Absorption ¹ by total immersion, typical tested, volume % ASTM C272			1.1
Flame Spread Index ASTM E84			<25
Smoke Developed Index ASTM E84			<450
Maximum use temperature			165°F (74°C)
ASTM C578 Compliance, Type			II

¹ Please refer to ASTM C578 specification for complete information. R-values are based on 1" thickness.

² Compressive strength is measured at 10 percent in accordance with ASTM C578. A safety factor is required to prevent long-term creep for sustained loads. For static loads, a safety factor of 3:1 is recommended.

Product and Packaging Data.

Product	Product Dimensions Thickness (in) x Width (in) x Length (in)	Pieces per Bundle
R-5	1-1/16 x 48 x 96	11
R-10	2-1/8 x 48 x 96	5
R-15	3-1/4 x 48 x 96	3

Warranty.

Neopor HPE-150 is covered by a 50 year limited warranty ensuring thermal performance

Product Availability and Support.

Neopor HPE-150 is supported by a team of experts who work with you to answer your questions, offer solutions, and do

everything they can to make sure your project goes smoothly and ends successfully.

Neopor HPE-150 is manufactured and sold by a network of locations throughout North America utilizing F5200 Plus and F5300 Plus resins..

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