AMERIPOR

YOUR EPS • GPS SOLUTION PARTNER

Neopor® GPS Insulation

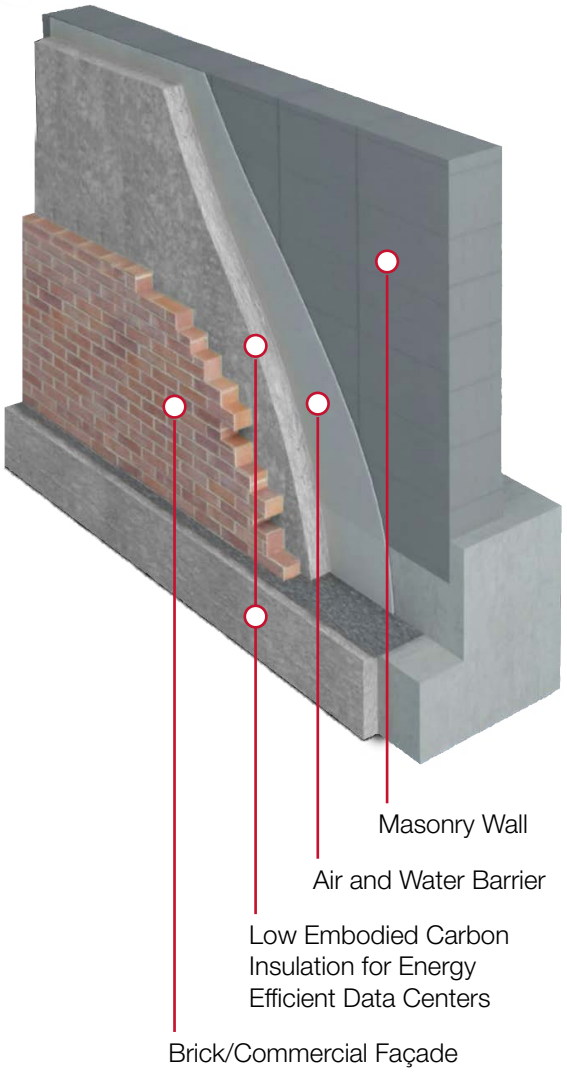
Low Embodied Carbon Insulation for Energy-Efficient Data Centers

Overview:

Data centers are among the most energy-intensive buildings in the world — and their thermal envelopes directly impact operational costs, carbon footprint, and long-term performance.

Neopor® GPS Insulation delivers the highest R-value in the Neopor GPS product family with industry-leading low embodied carbon, making it the ideal choice for mission-critical exterior wall systems, precast concrete panels, and below-grade applications.

Manufactured under UL and International Code Council (ICC) third-party independent audit and certification, Neopor GPS delivers stable, long-term thermal performance without relying on captive blowing agents — a critical advantage in high-performance building envelopes where R-value consistency over decades is non-negotiable.



Why Neopor® GPS for Data Center Envelopes?

- **Low Embodied Carbon**
  GPS insulation has one of the lowest embodied carbon profiles of any rigid foam — critical for LEED, BREEAM, and whole-life carbon commitments on data center projects.
- **Superior Thermal Efficiency**
  Achieve the same R-value as XPS with up to 30% less material — enabling thinner wall profiles without sacrificing performance in space-constrained data center designs.
- **Low Water Absorption**
  Maximum 1.1% water absorption by volume — protecting thermal performance and structural integrity even in demanding below-grade or exterior wall applications.
- **Stable R-Value — No Drift**
  Unlike XPS, Neopor GPS does not rely on captive blowing gases to achieve its R-value. Performance is stable at day one and remains consistent for the life of the building.
- **Precast & Tilt-Up Ready**
  Neopor board surfaces bond directly to precast concrete — no surface preparation required. Compatible with the fast-cycle precast and tilt-up methods preferred in large-scale data center construction.
- **Design Flexibility**
  Custom sizes and dimensions available up to 40 inches in thickness, including varying slopes — accommodating complex data center envelope specifications and local energy code requirements.

Neopor®
Innovation in Insulation

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Data Center Exterior Wall Applications

- **Precast Concrete Sandwich Panels:** Continuous insulation layer bonded directly to precast wythe — no adhesive prep needed. Ideal for hyperscale and colocation data centers with aggressive build schedules.
- **Masonry / CMU Cavity Walls:** Installed as continuous exterior insulation behind brick or metal panel facades, eliminating thermal bridging and meeting ASHRAE 90.1 compliance for commercial and mission-critical occupancies.
- **Tilt-Up Concrete Construction:** Compatible with tilt-up panel systems commonly used in large single-story data center campuses, delivering thermal continuity without adding wall thickness.
- **Below-Grade Foundation & Slab-Edge:** Low water absorption and stable R-value make Neopor GPS the preferred choice for below-grade perimeter insulation protecting foundation walls and slab edges.

NEOPOR® PLUS GPS TECHNICAL PROPERTIES

Neopor Plus GPS rigid foam is today's energy-efficient and cost-effective insulation solution for architects, builders and contractors.

Property	Unit	Neopor Plus GPS				
ASTM C578 Classification		Type I	Type VIII	Type II	Type II+	Type IX
Compressive Resistance	at yield of 10% deformation in psi (min)	10.0	14.0	15.0	20.0	25.0
Thermal Resistance (R-value)	°F · ft² · h/BTU (°C · m²/W) at 75°F	4.7	4.7	4.7	4.7	4.7
	°F · ft² · h/BTU (°C · m²/W) at 40°F	5.0	5.0	5.0	5.0	5.0
Water Vapor Permeance	Max perm (ng/Pa · s · m²)	4.0	3.1	3.1	3.1	2.5
Water Absorption by Total Immersion	Max volume % absorbed	1.1	1.1	1.1	1.1	1.1
Flexural Strength	psi	25.0	32.0	39.0	40.0	50.0
Density	lbs/ ft³ (min)	0.90	1.15	1.35	1.45	1.80
Flame Spread	Index	5				
Smoke Development	Index	25				

Please note:
R means resistance to heat flow. The higher the R-value, the greater the insulating power. Ask your representative for the fact sheet on R-values. The technical and physical metrics provided in this table are reference values for insulation products made of Neopor Plus GPS.
The values and properties may vary depending on how they are processed and produced. The R-value properties are based on 1-1/16 in thickness. Water absorption rates typical when tested according to C272.

R-value properties based on 1-1/16 in. thickness. Water absorption rates typical when tested per ASTM C272.

Sustainability & Carbon Performance

GPS insulation carries one of the lowest Global Warming Potential (GWP) profiles among rigid foam insulation materials. As data center developers face increasing pressure from hyperscaler sustainability mandates, investor ESG requirements, and emerging embodied carbon regulations, specifying low-GWP insulation is no longer optional — it is a competitive and compliance imperative.

- No ozone-depleting substances (ODS) in manufacturing
- Does not rely on high-GWP blowing agents (unlike XPS)
- Supports whole-life carbon modeling and EPD documentation
- Compatible with LEED v4.1 Materials & Resources credits
- Aligns with ASHRAE 90.1 continuous insulation requirements