

Product Information

Graphite Polystyrene (GPS) Insulation Board



DESCRIPTION:

Graphite Polystyrene (GPS) Insulation Board also known as graphite-enhanced expanded polystyrene (e.g., Neopor® by BASF), is a lightweight, rigid, closed-cell foam plastic insulation material. **GPS is an advanced variant of traditional EPS**, infused with high-purity graphite particles that reflect radiant heat, providing superior thermal performance. Like standard EPS in EIFS, GPS boards attach to the substrate (via adhesive, mechanical fasteners, or both), then cover with a reinforced base coat (typically polymer-modified cementitious material embedded with fiberglass mesh) and a textured protective finish coat. GPS is increasingly preferred in EIFS for its higher energy efficiency, allowing thinner walls to achieve the same or better R-values, while maintaining compatibility with drainage systems and decorative finishes.



KEY CHARACTERISTICS OF GPS FOR EIFS:

- **Density** — Typically equivalent to Type I or II (nominal 1.0–1.25 lb/ft³ or ~16–20 kg/m³), with graphite infusion for improved properties without significantly increasing density.
- **Form** — Molded flat boards, commonly 2 ft x 4 ft (610 mm x 1220 mm) or larger (up to 4 ft x 8 ft), with thicknesses ranging from 1–6 inches (25–152 mm) or more, depending on system approval.
- **Properties** — Closed-cell structure for low water absorption; aged/conditioned for stability; flame-retardant additive; distinctive gray/silver color due to graphite; higher R-value stability, especially in colder temperatures; recyclable and free of CFCs/HCFCs.
- **Benefits in EIFS** — Superior thermal performance (approximately R-4.7 to R-5.0+ per inch at standard temperatures, increasing in colder conditions); **up to 20–30% better insulation than standard EPS**; lightweight and easy to cut/shape for architectural details; cost-effective for meeting stringent energy codes with thinner profiles.

BASIC STANDARDS FOR GPS IN EIFS: GPS used in EIFS must meet requirements tailored for exterior exposure, adhesion, and long-term performance, often building on EPS standards with manufacturer-specific approvals.

- **ASTM E2430/E2430M** – The primary standard: Standard Specification for Expanded Polystyrene (EPS) Thermal Insulation Boards for Use in Exterior Insulation and Finish Systems (EIFS) and EIFS with Drainage. It covers flat, uncoated EPS boards, including requirements for virgin material content, dimensional tolerances (length, width, thickness, edge trueness, flatness, squareness), aging/conditioning for stability, low moisture content, and other physical properties specific to EIFS applications.
- **ASTM C578** – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation. EIFS-grade EPS typically complies with Type I requirements (minimum density 0.90 pcf, compressive strength ≥10 psi, etc.), as a baseline.
- **Additional considerations:** Compliance with building codes (e.g., IBC, IRC, IECC for continuous insulation); system-specific approvals from manufacturers and guidelines from the EIFS Industry Members Association (EIMA).

Note that not all EPS is suitable for EIFS—only boards manufactured and certified to these standards (often labeled accordingly) should be used to avoid issues like poor adhesion or deformation

ATTENTION/IMPORTANT

This product is intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. It should be installed in accordance with those specifications and Decoplast instructions. Greenmaker Industries LLC. disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, or for other construction activities beyond Greenmaker Industries control. Improper use of this product or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to this product, and to the structure of the building or its components. GREENMAKER INDUSTRIES. DISCLAIMS ALL WARRANTIES EXPRESSED OR IMPLIED EXCEPT FOR EXPLICIT LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCEPTED BY BUILDING OWNERS IN ACCORDANCE WITH DECOPLAST WARRANTY WHICH ARE SUBJECT TO CHANGE FROM TIME TO TIME. For the most current information on proper application, clean-up, mixing, specifications and additional information please refer to the Decoplast website, www.decoplast.com.



Greenmaker Industries
697 Oakwood Avenue
West Hartford, CT 06110
860-761-2830

Greenmaker Industries
5841 Jacaranda Drive, SE
Mableton, GA 30126
404-691-4000

www.decoplast.com