

# Product Information Bulletin

# 246

## **Plasti-Fab GeoSpec EPS24 Lightweight Fill Material Properties**

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### Plasti-Fab® GeoSpec® EPS24 Lightweight Fill Material

**Plasti-Fab® GeoSpec® EPS24** fill material is a rigid closed cell foam plastic manufactured from moulded expanded polystyrene (EPS) block. Traditional earth fill materials are generally more than 100 times heavier than **GeoSpec** fill material and can cause settlement or instability of underlying soils. **GeoSpec EPS24** fill material, in either block or board form, is used in ground fill applications where a lightweight fill material is required to reduce stresses on underlying or adjoining soils/structures.

Typical uses include lightweight fill material for landscaping and road embankment construction. The table below provides material property values for **GeoSpec EPS24** fill. Plasti-Fab also provides design assistance in selecting the required **GeoSpec** fill material for specific applications.

**GeoSpec EPS24** is a customized EPS geofam block type with material properties developed to meet customer requirements. Although **GeoSpec EPS24** type designation is not a product type within ASTM D6817, **Standard Specification for Rigid Cellular Polystyrene Geofam**, material properties are monitored under a third party certification program to meet or exceed values provided in the table below.

Material Property <sup>1</sup>	Test Method	Units	GeoSpec Type EPS24
<b>Product Density</b> <i>Minimum</i>	ASTM C303	kg/m <sup>3</sup> (pcf)	24.0 (1.50)
<b>Compressive Resistance</b> <sup>2</sup> <i>Minimum at 1% strain</i>	ASTM D1621	kPa (psi)	65 (9.4)
<b>Compressive Modulus</b> <i>Minimum</i>		kPa (psi)	6,500 (940)
<b>Flexural Strength</b> <i>Minimum</i>	ASTM C203	kPa (psi)	276 (40)
<b>Limiting Oxygen Index</b> <i>Minimum</i>	ASTM D2863	%	24
<b>Additional Compressive Resistance Properties<sup>3</sup></b>			
<b>Compressive Resistance</b> <i>Minimum at 5% Strain</i>	ASTM D1621	kPa (psi)	140 (20.0)
<b>Compressive Resistance</b> <i>Minimum at 10% Strain</i>		kPa (psi)	155 (22.5)

1. GeoSpec lightweight fill material properties are third party certified under a certification program administered by Intertek based upon ASTM D7557, **Standard Practice for Sampling of Expanded Polystyrene Geofam Specimens**.

2. Compressive resistance at 1% strain is within the elastic limit for the GeoSpec types in the above table and is accepted as the design compressive resistance to limit long-term deformation under structural load.

3. Compressive resistance at 5% and 10% strain in the above table are provided for applications where the intended end-use requires long-term deformation under structural load – i.e., a compressible product.