

# INSULPERM<sup>®</sup> GEOFOAM



## Commercial Product Data Sheet

### Product Description

Insulperm Geofoam is a premium quality, CFC-free expanded polystyrene insulation board used in geotechnical applications. It is a manufactured block material that meets the engineered product specification standards of ASTM C 578. Standard densities range from 11 kg/m<sup>3</sup> to 28.8 kg/m<sup>3</sup> (0.7 lb/cf to 1.8 lb/cf). The density range allows for the specification of a material with the mechanical properties required by the project.

### Product Uses

Insulperm Geofoam is used in ground fill applications where a lightweight fill material is required to reduce stress on underlying or adjoining soils/structures. Projects involving roads, bridge approach fills, embankments, levees, berms, foundations, plaza decks, green roofs, etc. can benefit from the use of Insulperm Geofoam.

### Product Size and Shape

Insulperm Geofoam is produced in block form and is easily positioned at the job site.

Standard sizes: 1.2 m (4') widths and 2.4 m (8') lengths.

75 mm (3") to 760 mm (30") thicknesses.

Physical Properties of Insulperm Geofoam					
Property	Type XI	Type I	Type VIII	Type II	Type IX
Density, min., kg/m <sup>3</sup> , (lb/ft <sup>3</sup> )	11.2 (0.70)	14.4 (0.90)	18.4 (1.15)	21.6 (1.35)	28.8 (1.80)
Compressive Resistance <sup>1</sup> @ 1% deformation, min., kPa (psi)	22 (3.2)	32 (4.6)	43 (6.2)	57 (8.3)	82 (11.9)
Modulus of Elasticity <sup>1</sup> , min., kPa (psi)	2200 (319)	3200 (464)	4300 (624)	5700 (827)	8200 (1189)
Flexural Strength min., kPa (psi)	69 (10)	172 (25)	207 (30)	276 (40)	345 (50)
Water Absorption by Total Immersion, max., volume %	4.0	4.0	3.0	3.0	2.0
Oxygen Index, min., volume %	24.0	24.0	24.0	24.0	24.0
Buoyancy Force (kg/m <sup>3</sup> ) (lb/ft <sup>3</sup> )	952 (59.4)	955 (59.6)	958 (59.8)	961 (60.0)	969 (60.5)

<sup>1</sup>ASTM D 1621-00 using 305 mm (12") cubes.

### Limitations and Cautions

Insulperm Geofoam application should be designed with density modifications when water will be present in the insitu condition. In conditions where Geofoam is periodically subjected to submergence from fluctuating ground water, add 30 kg/m<sup>3</sup>. In conditions where Geofoam is continually below ground water, add 80 kg/m<sup>3</sup>. These design recommendations are based on potential water absorption and the effects on density when analyzing cases involving downward loading. For analysis cases involving uplift loading, the buoyancy values given in the table above should be utilized.

Current copies of all Siplast Commercial Product Data Sheets are posted on the Siplast Web site at [www.Siplast.com](http://www.Siplast.com).

Rev 9/08

Siplast

1000 E. Rochelle Blvd. • Irving, Texas 75062-3940 • 469-995-2200 • [www.siplast.com](http://www.siplast.com)  
In Canada: 201 Bewicke Ave., Suite 210 • North Vancouver, BC V7M 3M7 • Toll Free 1-877-233-2338  
Customer Service in North America: Toll Free 1-800-922-8800



An Icopal Group Company