

This specification supersedes all those previously published.

**Synthetic Compressible Inclusion**

Description

Furnish Synthetic Compressible Inclusion (SCI) panels to the lines, grades, and thicknesses specified and where shown on the plans or as directed in writing by the Engineer.

Materials

Synthetic Compressible Inclusion (SCI) panels shall be manufactured from Type XII High Grind EPS in accordance with the GeoTech Systems Corporation approved procedure.

The panels shall be 4 ft x 4 ft (1.22m x 1.22m) x 10 inches (25.4cm) thick or in the thickness shown on the plans. The SCI panels shall have a thickness tolerance of no more than 6% for the thickness specified, and the other dimensions in accordance with any requirement of the plans.

PHYSICAL PROPERTIES

<u>TEST</u>	<u>Property</u>	<u>Nominal Value</u>	<u>Tolerance</u>
ASTM D1622	Density (Nominal)	1.0 pcf (352 kg/m <sup>3</sup> )	+/- 22%
ASTM D1621*	Strength at 10% Deformation	< 5 psi (34.5 kPa)	Min 4.2 psi (29 kPa)
ASTM D1623	Tensile Strength	16 psi (110 kPa)	+/-20%
ASTM D732	Shear Strength	55 psi (379 kPa)	+/- 22%
ASTM D1621*	Modulus of Elasticity	< 100 psi (689 kPa)	Min 80 psi (552 kPa)

\* This property applies only to the elasticized axis (the thickness).

PHYSICAL STANDARDS

ASTM D3345-74 Insect Resistance (ants, termites, etc)

The SCI Panels shall be produced by a manufacturer with a quality control program covering the raw material selection, manufacturing process, and periodic property assurance testing.

The SCI panels shall be labeled with the manufacturer’s name and product type.

**BASIS OF ACCEPTANCE:**

Furnish the Engineer with two copies of the Objective Quality Evidence that the lot was manufactured in accordance with the prescribed process, using suitable material, and found to pass spot checks of the listed Physical Properties.

The Engineer will randomly test SCI panels delivered to the job site for compressive strength at 10% deformation. If any panel does not conform to the maximum allowable compressive strength, the sampled shipment will be rejected in writing by the Engineer.

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## **CONSTRUCTION DETAILS**

### **GENERAL:**

Exercise care to prevent damage to the SCI panels during delivery, storage, and construction. Damaged panels will not be used.

Protect the SCI panels from:

- (1) Organic solvents, such as acetone, benzene, and paint thinner
- (2) Petroleum based solvents such as gasoline and diesel fuel
- (3) Open flames
- (4) Prolonged exposure to sunlight (no more than 90 days) during shipping and on site storage.

These restrictions apply through the life of the material, so the design for use in construction must assure the material will be protected from the chemical threats that could seep onto the materials following spills.

### **INSTALLATION:**

If necessary, place 3 walnut size daubs of a polystyrene compatible adhesive evenly spaced across the top of the panel on the surface facing the load. Stagger panel joints. Trim the panels as necessary to maintain proper coverage throughout the compressible volume layer. Trim or cut the panels with a handsaw or alternative cutting method approved by the Engineer. Panels should not be trimmed in their thickness without approval of the Engineer.

Avoid continuous joints by placing the panels in a pattern with each successive layer staggered midway over the previous layer as shown on the plans.

### **METHOD OF MEASUREMENT**

The quantity of Synthetic Compressible Inclusion is the number of square yards satisfactorily installed with the necessary thickness as measured in its final position.