

## GEOFOAM NO. 5004


**SUBJECT: R-VALUES OF GEOFOAM**

**DATE: SEPTEMBER 2007 (REVISED JANUARY 2019)**

R-Shield® Geofoam is manufactured in conformance to ASTM D6817, “Standard Specification for Rigid Cellular Polystyrene Geofoam.” This standard covers the material properties most often required for Geofoam.

However, R-Shield Geofoam is often used in applications which require detailed information of the insulation performance, or R-value. The following Table provides R-value information for

R-Shield Geofoam. The values in the table are based on testing in accordance with ASTM C177, “Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus,” or ASTM C518, “Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.”

R-SHIELD GEOFOAM PROPERTIES								
PRODUCT								
		12	15	19	22	29	39	46
Density <sup>1</sup> , min.	lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	0.70 (12)	0.90 (15)	1.15 (18)	1.35 (22)	1.80 (29)	2.40 (38)	2.85 (46)
R-value <sup>1</sup> , Thermal Resistance, per inch, ASTM C518	25°F °F.ft <sup>2</sup> .h/Btu (°K.m <sup>2</sup> /W)	3.6 (0.63)	4.4 (0.77)	4.5 (0.80)	4.8 (0.84)	5.0 (0.88)	5.0 (0.88)	5.1 (0.90)
	40°F °F.ft <sup>2</sup> .h/Btu (°K.m <sup>2</sup> /W)	3.4 (0.60)	4.2 (0.73)	4.3 (0.75)	4.6 (0.80)	4.8 (0.84)	4.8 (0.84)	4.9 (0.86)
	75°F °F.ft <sup>2</sup> .h/Btu (°K.m <sup>2</sup> /W)	3.2 (0.56)	3.9 (0.68)	3.9 (0.69)	4.2 (0.73)	4.4 (0.77)	4.4 (0.77)	4.5 (0.78)
ASTM D6817 Compliance, Type		EPS12	EPS15	EPS19	EPS22	EPS29	EPS39	EPS46