



## TECHNICAL DATA SHEET STYROFOAM SM

### DESCRIPTION

A blue multicellular board of extruded polystyrene homogeneous foam containing a flame retardant additive and manufactured using zone safe HCFC-142B & HCFC-22. The board faces will be as extruded, having natural skins and butt edges on all four sides. Mainly used as slab insulation in cold store floors.

### PROPERTIES

Test Item:	Limits:	Unit:	Test Method & Notes
Density:	30 min	Kg/cu.m.	ASTM C-303
Compressive Strength:	210 min	K/Pa	ASTM D-1621 Vertical direction, aged
Dimensional Stability	(±) 1.5 max	% change	
Thermal Resistance 'R'	0.94 min 1.01 min 1.08 min	m <sup>2</sup> .K/W m <sup>2</sup> .K/W m <sup>2</sup> .K/W	per 25mm @ 4°C per 25mm @ 12°C per 25mm @ 23°C
Thermal Conductivity	0.0288	W/m.K	ASTM C-518 at 24°C
Water Absorption	0.7 max	% v/v	ASTM D 2842
Water Vapour Permeability:	1.7 max	ng/PA.M.S	ASTM C355 (WVP)

### R Rating 28mm = R 1.00:

13mm =	R 0.46
25mm =	R 0.89
30mm =	R 1.07
50mm =	R 1.78
100mm =	R 3.57
150mm =	R 5.36

**Linear Coefficient of Thermal Expansion:** 0.063 avg mm / m / °C

**Maximum Continuous Operation Temperature:** 75°C

**Surface:** Extruded skins will not have holes or cracks extending into the board more than 3mm and no ripples. Waves greater than 1.0 mm in height.

**Dimensions:** Length 2438mm, Width

**Thickness:** Stock size: 3" imp. ie. 76.2mm.  
 Other thicknesses available on application include 1" (25.4mm), 2" (50.8mm), 4" (101.6mm)

**Squareness:** (Difference between length of diagonals): 6mm max.

**Notes:** STYROFOAM SM insulation has a high compressive strength at relatively low compression. Combined with a low thermal conductivity, this material provides an ideal insulation for load bearing concrete floors in low temperature buildings. Floors are subject to high static loads from stored product and high dynamic loads from traffic such as fork trucks. Floor design involves a combination of insulation strength, top slab thickness and reinforcing to suit the loading required. The wearing slab for a store at -20°C is typically 150mm supported on 150mm of STYROFOAM SM insulation.