

TECHNICAL INFORMATION

Mechanical properties of extruded styrene structural foam

PROPERTIES	TEST METHOD	RESULTS	NOTES
Tensile strength MPa	ISO 527	30.0	
Elongation at break %	ISO 527	2.5	
Modulus of Rupture MPa	BS373	59.8	3 point bending
Modulus of elasticity MPa	BS 373	2430.0	
Stress at proportional limit MPa	BS 373	50.5	
Compression strength parallel to grain MPa	BS 373	56.7	
Compression strength perpendicular to grain MPa	BS 373	20.7	
Screw retention kN	BS 6984	2.5	1.5 inch No.6 screw 22mm depth
Nail retention kN	BS 6948	0.88	2.5 x 38mm wir nail, 22mm depth
Impact strength KJ/m2	BS 373	0.85	3 point bending
Impact height M	BS 373	0.66	For 20 x 20, span 280mm, tup 3.3 lb
	BS 373	0.38	For 24 x 28, span 280mm, tup 4.4kg
Water absorption %	ISO 82	0.14	40 x 40 x 7.5
Coefficient of thermal expansion 1/C	DIN 62-53491	5 x 10 - 5	40 x 40 x 7.5
Toxic Gas Factor (only 2 detected from 8 tested)	SNES 714C02, CO, HC1, HCN H2SS02, NOX, Ammonia	0.7, 2.6	Carbon dioxide Carbon monoxide 0 - 3 low toxicity
Classification of flame spread	BS 476	Class 1	Not standard product and only available by special order
UV stability	ASTM E383-B	Good	No change in mechanical strength 375MJ/m2
Viscat softening point	ISO 306	91oC	
Density g/cc		0.56	