

Type ES and EL thermal insulation boards

Fibre cement board	Symbol	Test method	Unit	Value
Gross density	ρ_a		kg/m ³	1600
Thermal conductivity	λ_D		W/mK	0.360
Fire behaviour				A2-s1, d0
Maximum water absorption			%	25
Moisture content in natural state			%	10 ±15
Expansion at extreme temperatures and humidity (-5°C to +100°C, 20% to 90%)			mm/m	1.5
Thermal expansion coefficient			°C ⁻¹	0.00001
Frost resistance				Optimum
Oil and acid resistance				Good
Constancy of impermeability				Absolute
Wear resistance				Good
Compressive strength			N/mm ²	40
Breaking strength, vertical to fibre			N/mm ²	32
Breaking strength, parallel to fibre			N/mm ²	22
Elasticity			N/mm ²	2

Expanded rigid polystyrene foam (EPS)	Symbol	Test method	Unit	Value
Gross density	ρ_a	1602	kg/m ³	15
Thermal conductivity	λ_D	279	W/(m·K)	0.038
Specific thermal capacity	c		Wh/(kg·K)	0.39
Water vapour diffusion resistance factor	μ	12086		40
Fire behaviour classification in acc. with EN		13501-1		E
Fire behaviour classification in acc. with VKF		VKF	BKZ	5,1
Fire behaviour group		VKF		RF2 (cr)
Compression stress at 10% compression	σ_{10}	826	kPa ³⁾	≥ 60
Creep behaviour under pressure (50 years, compression 2%)	σ_C	1606	kPa ³⁾	12
Top application limit temperature, non-weight-bearing			°C	75
Cell content				Air

Expanded rigid polystyrene foam with graphite additive (EPS lambda)	Symbol	Test method	Unit	Value
Gross density	ρ_a	1602	kg/m ³	18
Thermal conductivity	λ_D	279	W/(m·K)	0.030
Specific thermal capacity	c		Wh/(kg·K)	0.39
Water vapour diffusion resistance factor	μ	12086		30
Tensile strength, vertical to panel board	σ_{mt}	1607	kPa	≥ 80
Fire behaviour classification in acc. with EN		13501-1		E
Fire behaviour classification in acc. with VKF		VKF	BKZ	5.1
Fire behaviour group		VKF		RF2 (cr)
Top application limit temperature, non-weight-bearing			°C	75
Cell content				Air