EXPANDED POLYSTYRENE INSULATION BOARDS FOR INVERTED ROOFS

WHAT ARE SPRA COMPONENT QUALITY STANDARDS?

SPRA Component Quality Standards set a benchmark of performance for products used in single ply membrane systems. They are a vital aid to specification and define the minimum technical standard for membership of the Association. All SPRA CQS are available by download from www.spra.co.uk

PRODUCT DESCRIPTION

Expanded polystyrene is produced by fusing together expanded beads of polystyrene in a high pressure steam environment. Specific products are available for warm roof applications (insulation below waterproof membrane) and for inverted roof applications (insulation above waterproof membrane).

TYPICAL APPLICATIONS

Warm roof constructions in plain or tapered form. Overlays to existing steel panel roofs (special products).

HARMONISED EUROPEAN PRODUCT SPECIFICATION

EN 13163 Thermal insulation products for buildings – Factory made products of expanded polystyrene (EPS) – Specification.

REQUIREMENTS				
Product characteristic	Symbol	Characteristic value/class	Tolerances	Test Method
DIMENSIONAL				
Thickness	d	T1	± 2mm	BS EN 823
Width	b	W1	± 0.6% or ± 3mm	BS EN 822
Length	l	L1	± 0.6% or ± 3mm	BS EN 822
Deviation from Squareness (on length & width)	S_b	S1	± 5mm / 1000mm	BS EN 824
Flatness	S_{max}	P1	± 30mm	BS EN 825
		P4	± 5mm	BS EN 825
Dimensional stability under laboratory conditions	–	0.5% / DS(N)5		BS EN 1603
THERMAL				
Conductivity at 10°C EPS200 EPS300	 λ_D λ_D	 0.033W/mK 0.033W/mK	 – –	BS EN 12667 or BS EN 12939
REACTION TO FIRE				
Euroclass: flame retardant modified boards	–	E		BS EN 13501-1
MECHANICAL				
Nominal density EPS200 EPS300		 30Kg.m^{-3} 40Kg.m^{-3}		BS EN 1602
Compressive strength at 10% deformation EPS200 EPS300	 CS(10) CS(10)	 200kPa 300kPa		BS EN 826
Design load at 1% deformation EPS200 EPS300		 90kPa 120kPa		BS EN 826
Bending strength EPS200 EPS300	 σ_b σ_b	 250kPa / BS 450kPa / BS		BS EN 12089
MOISTURE				
Water vapour diffusion resistance factor	μ	≤3%		BS EN 12086
Water absorption under submersion		≤1%		BS EN 12087

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