

EXTRUDED POLYSTYRENE INSULATION BOARDS FOR ROOFING

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

Extruded polystyrene panels are made by a process of extrusion, from a resin of polystyrene. The polystyrene along with other additives is fused and mixed to form a viscous fluid, a foaming agent is injected, all in a pressure and temperature controlled environment. The mixture then exits the machine via an extruder to produce the final product.

TYPICAL APPLICATIONS

- Warm roof construction, where the insulation is placed immediately below the waterproof membrane.
- Inverted warm roof construction, where the insulation is placed above the waterproof membrane.
- Roofs generally: waterproof membrane to be laid to a finished fall of at least 1:80.
- Ground floor constructions, where the insulation is used above or below the damp proof membrane

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
Thickness	d	T1	± 2mm (thickness <50mm) -2/+3mm (thickness 50-120mm) -2/+8 (thickness >120mm)	BS EN 823
Width	b		± 8mm	BS EN 822
Length	l		± 10mm	BS EN 824
Flatness	S _{max}		± 28mm	BS EN 825
Dimensional stability under specified temperature and humidity conditions	—	DS(TH) (70±2)°C and (90±5)% relative humidity	<5% (the relative changes in length, in width and in thickness)	BS EN 1604
Thermal conductivity at 10°C XPS300 XPS500 XPS700	λ _D λ _D λ _D	0.035 – 0.040 W/m.K 0.036 – 0.038 W/m.K 0.036 – 0.038 W/m.K		BS EN 12667 or BS EN 12939
Euroclass Flame retardant modified boards	—	E		BS EN 13501-1
Density XPS300 XPS500 XPS700	—	30 Kg/m ³ 35 Kg/m ³ 45 Kg/m ³		BS EN 1602
Compressive Strength (10% deformation) XPS300 XPS500 XPS700	—	300kPa/CS(10/Y)300 500kPa/CS(10/Y)500 700kPa/CS(10/Y)700		BS EN 826
Water vapour Absorption Total Immersion	% vol	WL(T)0.7 <0.7%		BS EN 12087
Water Vapour diffusion resistance factor, μ		MU100 (≥100)		BS EN 12086

SPRA ASSOCIATE MEMBERS

Kingspan Insulation (www.insulation.kingspan.com)

Knauf Insulation (www.knaufinsulation.co.uk)