

Shieldfoam XPS

Extruded Polystyrene Foam Insulation Sheets



MICSHIELD®

Description

Shieldfoam XPS with their closed-cell structure and lack of voids, provide excellent resistance to moisture and air infiltration, feature a low thermal conductivity, and maintain a stable long-term R-value. They are impervious to rot, mildew, and corrosion, controlled compressive strength, resistance to chemicals commonly found in soil, and retain their insulating performance over time.

Uses

- Used on basement walls and under slab on grade to reduce heat loss and prevent moisture penetration.
- Installed behind cladding and stone walls.
- Used in external wall insulation systems (ETICS), cavity walls, and interior wall applications.
- Roof Insulation
- Suitable for commercial wall systems, insulated concrete sandwich panels, and steel-stud framing with exterior sheathing.

Characteristics / Advantages

- Available in wide range of thicknesses.
- Excellent thermal insulation with low thermal conductivity.
- Long-term thermal insulation performance.
- High mechanical and compressive strength.
- High resistance to thermal cycle (freeze/thaw).
- Low moisture absorption.
- Resistant to rotting, mould, and fungal growth.
- Strong resistance to chemicals and soil acids.

Standard Compliance

ASTM C 578 - 13 Type VII

Shelf Life and Storage

Shieldfoam XPS has an unlimited shelf life when stored in cool and dry conditions, protected from direct sunlight, heat, and moisture.

Technical Support

Refer to contacting technical information, method statement or technical support team for any inquiry.

Typical Properties

Color	Blue, Yellow, or green.
Density (ASTM D 162, BS4370-2)	32 – 35 kg/m³
Width x Length (EN 822)	600 x 1250 mm
Thermal Conductivity	
Tested @ (4.4°C Fresh) (DIN 52612, DIN 52615)	0.016 W/mK
Tested @ (10°C after 90 days) (ISO 8302, BS 874-2)	0.27 W/mK
Tested @ (24°C after 5 years) (ASTM C 578, ASTM C 177)	0.32 W/mK
Recommended design value @ RH 90%	
R-Value (ASTM C 578, ASTM C 518)	0.87 m²K/w
@ 24°C mean temperature of 1-inch thickness, Aged 180 days.	
Service Temperature (ASTM C 578)	-50 – 75 °C
Compressive Strength Vertical @ 10% Deflection for short-term load (EN 862)	310 kPa
Design Load for traffic	120 kN/m²
Tensile strength perpendicular to faces (ASTM D 1632)	590 kPa
Flexural Strength (ASTM C 203)	520 kPa
Shear Strength (ASTM C 273)	345 kPa
Water Vapor Permeability (BS 3837, ISO 18663)	46 ng/pa.s.m
Water Absorption (% by volume) @ 28 days of immersion 24°C (ASTM 272)	0.2 max <1
Freeze/Thaw resistance (% by volume) (EN 13164)	<1.0
Fire Behavior	Flame Retardant, Self-Extinguishing Difficult to ignite
Building Material Flammability Class	Class B2 (DIN 4102) Class A (BS 38370)
Flame Spread	5<75 (UL) ASTM E84 165<450 (UL) ASTM E84 Under Designation of ASTM C578
Dimensional Stability % per change 60°C, 28h & 90%RH (ASTM D 2126)	1.5 max

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