ECA Extruded Polystyrene

EXTRUDED POLYSTYRENE RIGID FOAM WITH SKIN

DESCRIPTION

The ECA Extruded Polystyrene panel features interconnected sealed cells and is manufactured using a continuous, fully automated extrusion process that adheres to international specifications and standards. This advanced technology ensures remarkable mechanical attributes, water vapor diffusion resistance, resistance to water absorption, even distribution of density, stable dimensions, exceptional compressive strength, resilience against aging, and immunity to insects, pests, bacteria, rodents, and microorganisms due to its lack of nutritional support for them. The ECA Extruded Polystyrene rigid foam possesses an outer skin and is offered both with and without shiplap edges.

USES

ECA Extruded Polystyrene applications include employing these panels as thermal insulation boards in roofing systems, flooring installations, wall constructions, perimeter insulation for underground structures, and as exterior insulation for cellar walls.

ADVANTAGES

- Closed-cell structure with a homogeneous and uniform density distribution.
- Extremely low moisture absorption.
- Sustained high insulation efficiency over the long term.
- Strong compressive strength.
- Resistant to aging.
- Resistant to decay.
- Excellent dimensional stability.
- High resistance to thermal cycling.
- Suitable for use in both hot and cold climates.

STANDARD

ECA Extruded Polystyrene complies with the requirements: ASTM D1751, BS 6093, and IS 1838.

TYPICAL PROPERTIES	
Appearance	Blue rigid foam
Thickness	50 mm
Density	35 kg/m^3 - 38 kg/m^3
Thermal Conductivity (@25°C) (ASTM C177)	0.028 W/mK
Compressive Strength (ASTM C165)	415 kPa ± 10%
Water Absorption (ASTM D2832)	< 0.5%

APPLICATION

Surface Preparation

Ensure that the concrete slab is both clean and reasonably smooth. Subsequently, the membrane can be directly placed onto the slab's surface. In instances where achieving a smooth concrete surface is not feasible, it is necessary to install a protective sheet beneath the membrane for added support.

Application Instructions

For protection against wind uplift, buoyancy, and ultraviolet degradation, you can employ either gravel or paving slabs as a safeguarding layer. In the case of using gravel, it's essential to opt for round, washed pebbles with a size distribution of 15 - 30 mm. These pebbles should be placed in a dry manner over a synthetic, non-fabric, and rot-proof felt filtering layer (deotextile membrane). For ECA Extruded Polystyrene with 50 mm thickness, employ a gravel layer depth of 50 mm or a paving slab thickness of 40 mm.

For internal wall insulation, ECA Extruded Polystyrene can be utilized for internal lining, either by employing adhesives or mechanical fasteners. This interior lining can then be covered using gypsum plasterboard or secured with fasteners and normal plaster through the use of wire mesh.

For cavity wall infulation, ECA Extruded Polystyrene can be fixed to the structural wall by employing adhesives or mechanical fasteners, and can be covered using brick.

PACKAGING

ECA Extruded Polystyrene is supplied in the following sizes (width x length x thickness): 600 mm x 1250 mm x 50 mm

Note: Other thicknesses may be available

STORAGE

ECA Extruded Polystyrene should be stored away from direct sunlight and ultraviolet rays.

HEALTH AND SAFETY

For more information, please check the Material Safety Data Sheet.

CONTACT

Al-Faiha for Engineering Products is the exclusive licensee manufacturer for ECA.
For more information, please contact us at techsupport@alfaihaengineering.com.

DISCLAIMER

ECA aims to ensure the accuracy of information and recommendations in the product literature. However, due to variations in materials, substrates, and site conditions, and without control over product application, storage, weather, and usage conditions, ECA cannot be held liable for any resulting issues.