

Technical Data Sheet

AWAZEL FOAM XPS Extruded Rigid Polystyrene Foam board

Description

AWAZEL FOAM XPS is the trade name of blue extruded rigid foam boards made of top-quality general-purpose polystyrene. Manufacture by state-of-the-art computerized extrusion machines according to international norms and standards. **AWAZEL FOAM XPS** boards are made in a continuous skin surface and developed into a close cell structure. This process allows high thermal resistance and superior water resistance properties. **AWAZEL FOAM XPS** provides the uniform density distribution, dimensional stability, very high compressive strength, aging resistance and immunity against insects, pests, bacteria, and rodent attacks. It also provides good physical properties and long-term performance. **AWAZEL FOAM XPS** is produced in Shiplap profile.

Awazel Foam XPS

Thermal conductivity of 0.028 W/mk when tested at 10⁰C (50⁰F) in accordance with DIN 52612/DIN52616 (0.20 Btu.in/ft².hr. F) when tested at 23.9⁰(75⁰F) in accordance with ASTM C-177-97.

Compressive strength to be of 300kPa (43psi) when tested in accordance with DIN 53421 or ASTM D-1621-73. Water vapor permeability of 0.4-0.6 perm inch, average, when tested in accordance with ASTM E 96-0.

Thermal Conductivity

AWAZEL FOAM XPS has a homogeneous structure and high resistance to water and vapor diffusion that delays the change in the cell gas composition, Aging phenomenon is thus tremendously slowed down, leading to a stable, long term, low thermal conductivity of approx. 0.030 W/mk at 40⁰C mean temperature.

Compressive Strength

It is determined by short-term standard test methods. For structural applications involving continuous high compressive load, non-uniform loads of high temperature, while designing and

adequate safety factor in design stress levels, should be provided to minimize deformation with time. These values are reduced at higher temperatures, but the mechanical properties are not affected adversely at lower temperatures, down to -40⁰C (-40⁰F)

Resistance to water and vapor penetration

AWAZEL FOAM XPS has a structure that consists of small size closed cells and outer foam skin of denser material on both sides. This allows it to remain dry in the high relative humidity and ambient temperature of the Middle East.

Chemical resistance

AWAZEL FOAM XPS is stable and has excellent resistance to acids, basis cold bitumen and silicon oil. On the other hand, it is unstable to tars, organic solvents, hydrocarbon gasoline and oil-based paints.

Installation

AWAZEL FOAM XPS should be applied loose with tight staggered joints over the separation layer **AWAZEL TEX 100 (above AWAZEL WATERPROOFING MEMBRANE)**. A water permeable filter synthetic fabric preferably of **AWAZEL TEX 140** should be installed with a 15-30 cm overlap on top of **AWAZEL XPS FOAM**.

Storage, handling, and application

AWAZEL FOAM XPS should be stored in a clean flat area, protected from direct sun light, Kept away from open flames and other sources of ignition.

During summer the built-up temperature underneath the boards exposed to direct sunlight may rise to around 90⁰C which may damage the insulation board. Once place on the roof the insulation boards should not be left exposed, to avoid damage. It is recommended that insulation boards should be covered immediately with the follow up system, eg. Paving slabs, screed etc.

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TECHNICAL DATA

Properties	Typical Results	Test Method
Density, min. Kg/M ³ lb/ft ³	32-35 2-2.2	DIN 53420 ASTM D-1622
<u>Thermal Conductivity</u> At 10 ⁰ C (50 ⁰ F) mean temperature of test, W/mK Mean Temperature 23.9 ⁰ (75 ⁰ F), Btu in/ft ² .hr. °F	0.028 0.20	DIN 52612/DIN52616 ASTM C-177-97
Compressive strength at 10% deflection Kpa psi	300 43	DIN 53421 ASTM D-1621-73
Water vapour diffusion Resistance to factor, μ	100-200	DIN 52615
Water vapour permeability, Perm-inch	0.4-0.6	ASTM E 96-00
Water absorption by submersion % By vol. % By vol.	0.2 <1.00	(± 1% by vol. precision) DIN53428 ASTM D-2842
Linear coefficient of thermal expansion and contraction (Heat soaking conditions) °C1 °F1	70x10 ⁻⁶ 39x10 ⁻⁶	
Fire classification (Germany) of Standard Product	B2 (difficult to ignite) / Class B	DIN 4102 / ASTM E 84
Size, mm Thickness, mm Color Appearance	L 1250 x W 600 20 – 100 Blue Uniform Texture with Skin	

Note: The above shown technical data are typical results obtained, to the best of our knowledge, from our quality control records, extra details can be provided upon request.

DISCLAIMER

Since application is conducted beyond our control, AWAZEL company shall not be responsible for improperly applied or misused products

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