

IMPROVED THERMAL CONDUCTIVITY



February 2018

ClimaFoam® XPS Board

For edge beams, green roofs, slabs and cool rooms

Description

ClimaFoam® XPS Board is a rigid extruded polystyrene (XPS) board. ClimaFoam® XPS Board is lightweight with a high compressive strength and are available in straight or shiplap edges.

Application

ClimaFoam® XPS Board can be used for the thermal insulation of:

Flat Roofs:

- in an inverted roof below ballast or paving slabs
- in a green/garden roof
- in a flat roof with a single ply membrane

Concrete Slabs:

- around trenches
- in between pods
- edge beams

Cool Rooms:

- refrigeration
- trucks

Thermal

The product has an estimated thermal conductivity of ClimaFoam® XPS Board is 0.030W/mK

Performance

- Excellent thermal performance
- High compressive strength
- Highly resistant to water absorption
- Lightweight and easy to install
- Tough and durable, not easily damaged
- Dimensionally stable

Caution - ClimaFoam® XPS Board is a flammable product and should not be used where the product could be exposed to flames.

ClimaFoam® XPS Board

Compliance

Will contribute to the thermal insulation of buildings and the compliance with the Building Code of New Zealand (NZBC) requirements.

Durability

The continuous service temperature limit of ClimaFoam® XPS Board is up to +70°C.

ClimaFoam® XPS Board is designed, used and installed and maintained in accordance with Knauf Insulation's instructions. It will meet or contribute to satisfying the NZBC Clause B2 Durability.

Performance B2.3.1:

- not less than 50 years, B2.3.1
- not less than 15 years and B2.3.1
- not less than 5 years

Compressive strength

ClimaFoam® XPS Board has an estimated compressive strength of 250 kPa and will withstand both occasional and long term static loads. The high compressive strength and rigidity of the boards allows a range of ballast materials including gravel, soil and concrete slabs to be used as part of the construction. Load bearing construction elements should be designed to adequately support the combination of imposed and dead loads without creating excessive deflection.

Vapour resistivity

ClimaFoam® XPS Board has an estimated water vapour resistivity of ClimaFoam® XPS Board is 625MN/g.m when tested in accordance with ASTM E96-2010.

Moisture absorption

ClimaFoam® XPS Board has an estimated moisture absorption 0.6% by volume when tested in accordance with ASTM C 272 and can be laid in standing water or up against wet concrete with negligible impact on the performance of the product.

Handling and storage

ClimaFoam® XPS Board is easy to handle and install. Ensure the board product is not stored close to open flames or other ignition sources and avoid volatile organic compounds and chemicals such as solvents. ClimaFoam® XPS Board should not be left exposed to prolonged sunlight as this will result in surface degradation.

ClimaFoam® XPS Board

| Thickness (mm) | Thermal conductivity* (W/mK) | R-Value (m ² K/W) | Width (mm) | Length (mm) | Joint Type | Compressive strength** (kPa) |
|--|------------------------------|------------------------------|------------|-------------|------------|------------------------------|
| ClimaFoam® XPS Board - 600mm wide | | | | | | |
| 30 | 0.030 | 1.0 | 600 | 1200 | Straight | 250 |
| 50 | 0.030 | 1.7 | 600 | 1200 | Straight | 250 |

| Thickness (mm) | Thermal conductivity* (W/mK) | R-Value (m ² K/W) | Width (mm) | Length (mm) | Joint Type | Compressive strength** (kPa) |
|---|------------------------------|------------------------------|------------|-------------|------------|------------------------------|
| ClimaFoam® XPS Board - 1200mm wide | | | | | | |
| 30 | 0.030 | 1.0 | 1200 | 2200 | Shiplap | 250 |
| 40 | 0.030 | 1.3 | 1200 | 2200 | Shiplap | 250 |
| 50 | 0.030 | 1.7 | 1200 | 2200 | Shiplap | 250 |
| 75 | 0.030 | 2.5 | 1200 | 2200 | Shiplap | 250 |

*The thermal values have been calculated on a thermal conductivity of 0.030

**ClimaFoam® XPS Board has an estimated compressive strength of 250 kPa. for critical applications the product should be independently tested.

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