# Fosroc Nitofoam TIB

constructive solutions

## Extruded Polystyrene Thermal Insulation Boards.

### Uses

Fosroc Nitofoam TIB provides high quality and effective insulation for roof & energy conservation in a wide range of industrial, commercial buildings, private dwellings

### Advantages

- High resistance to heat flow, i.e. low thermal conductivity.
- High insulation value.
- Resistance to water vapour diffusion and water absorption.
- Long term durability.
- Uniform density distribution.
- Does not contain CFC/HCFC.
- High compressive strength compared to other insulation material.
- Light weight and easy to handle.
- Resistance to bacteria and microorganism growth.
- Non-toxic.
- Odourless and Non-irritant to skin

### Standards compliance

- ASTM C 578 Type VI standard requirements for boards with thickness of 30 mm and above
- ASTM C 578 Type IV standard requirements for boards with thickness of 30 mm and below

### Description

Fosroc Nitofoam TIB is Extruded Polystyrene (XPS) rigid thermal Insulation foam board having closed cell structure and is produced in a fully automated continuous extrusion process in accordance with international specifications and standards. Its unique properties of high compressive strength, higher R value and low water absorption makes it an ideal insulating material for roof . Contact Fosroc local office for U value calculations of the system built-up.

Fosroc Nitofoam TIB should be covered with a waterproofing membranes such as Fosroc Proofex ORG/OFB/ORF.

### Properties

Heat Flow: Provides an excellent resistance to heat flow. There is no change in the K value (Thermal conductivity) of the material after prolonged usage and hence the heat flow into/out of the system remains intact.

Water Vapour: Closed cell structure, provides exceptional resistance to water permeability and will absorb less than 1 % water by volume.

Density: Has a uniformly high density and compressive strength, making it an ideal solution for over deck insulation of roof.

Fire: Tested as per DIN 4102 part 1 of Class B2.

Dimensional Stability: The regularity and homogeneity of cellular composition ensures good dimensional stability.

### Application instructions

#### Substrate condition

The substrate must be dry, free of dust, grease, oil and contaminants. A dry substrate is necessary because the foam system can react with substrate moisture, which can result in insufficient adhesion, open cellular foam system, low cross-link density and integrity of the foam.

### Application

Suitable polyethylene sheet to be installed on the RCC/Metal deck. Nitofoam TIB boards shall be installed loose laid with staggered joints. Boards to be covered with TPO membranes like Proofex ORG/OFB/ORF mechanically anchored to the substrate with suitable HD fasteners- Contact Fosroc local offices for details

### Limitations

Do not proceed with application if substrate is below 15°C or is wet, if the surface temperature is <3ºC above the dew point or if precipitation is imminent. Contact Fosroc office for advice

It should be noted that Fosroc Nitofoam TIB will turn yellow if exposed to UV/sunlight. This will not cause any negative effect on the physical properties of the product.

Fosroc Nitofoam TIB should be covered with a waterproofing membrane such as Fosroc Proofex ORG/OFB/ORF.

### Pack Quantity

Available in thickness varying from 20mm/25mm/30mm/40mm & above.

Dimension of the board: 600mm x 1250mm.

### Health and safety

Refer to appropriate Product Safety Data Sheet.

### Storage

Fosroc Nitofoam TIB has a shelf life of 12 months if kept in a dry, air conditioned store between +5ºC and +30ºC in the original unopened containers.

# Fosroc Nitofoam TIB

**Properties**

| Test Parameter | Unit | Test method | Specifications | | | |
|---|---|---|---|---|---|---|
| **Board thickness** | **mm** | | **20mm** | **25mm** | **30mm** | **40mm above** |
| Compressive Strength@10% Deflection, min | kPa (psi) | ASTM C1621 | 180 (26) | 240 (35) | 290 (42) | 350 (51) |
| Equivalent Thermal Conductivity, maximum | W/m.K | ASTM C518 | 0.0289 | 0.0289 | 0.0289 | 0.0289 |
| Flexural Strength min. | kPa | ASTM C203 | 345 | 345 | 414 | 414 |
| Water Vapour permeareance of 25.4mm thickness, maximum | ng/Pa.s.$m^2$ | ASTM E96 | 63 | 63 | 63 | 63 |
| Water Absorption by total immersion, maximum | % v/v | ASTM C272 | 0.3 | 0.3 | 0.3 | 0.3 |
| Dimensional Stability (change in dimensions), maximum | % | ASTM D2126 | 2 | 2 | 2 | 2 |
| Oxygen index minimum | % v/v | ASTM D2863 | 24 | 24 | 24 | 24 |
| Density, minimum | $kg/m^3$ | ASTM D1622 | 34 | 34 | 34 | 34 |
| Flammability | Class | DIN 4102 Part 1 | B2 | B2 | B2 | B2 |
| Surface Burning Characteristics | Class | ASTM E 84 | A | A | A | A |

**Important note :**
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