



XPS Flooring

Cold Store Floor - Technical Data Sheet

The high strength and excellent thermal properties of Sundolitt XPS make it the ideal solution for insulating Cold Store Floors.

Flooring provides excellent frost protection thermal performance and high compressive strength capability. It is the ideal insulation for commercial and industrial floors including cold stores.

XPS Benefits

-  High compressive strengths up to 700 kPa
-  Excellent thermal insulating properties
-  Resistant to freeze/thaw
-  Flame Retardant available
-  ODP = 0 GWP = <5
-  Rated A in BRE Green Guide
-  Fully Recyclable

The exceptionally high compressive strength and durability makes this the ideal insulation for floors where racking systems and fork lift trucks impose high loads on the floor and insulation. It will remain an effective insulation for the lifetime of the building into which it is installed.

Sundolitt XPS Flooring is easy to install and requires no special PPE when handling and cutting.



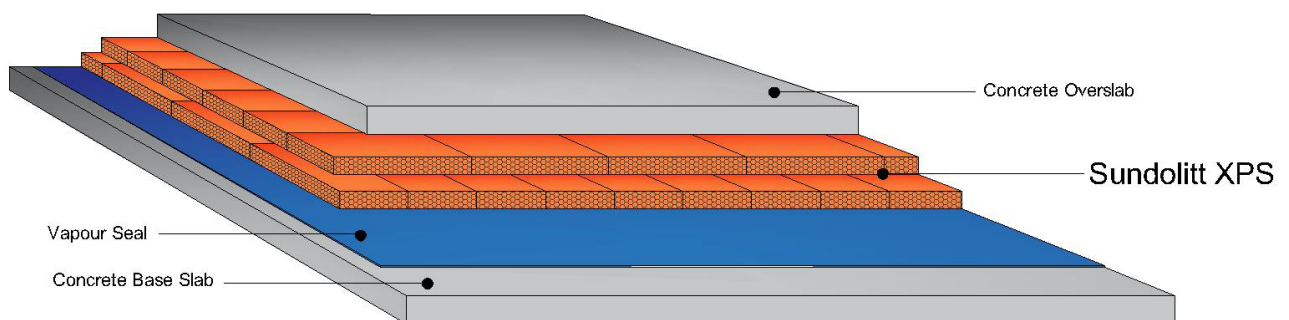
Design Considerations

Where cold storage is operated below 0°C there is a requirement to protect against ground heave. Without an insulation layer the water in the ground below the floor construction will freeze which causes it to expand and exert destructive forces on the floor slab.

The cold store floor may be ground bearing or suspended, whichever design of floor slab is used Sundolitt XPS is an integral part of the construction in providing frost protection and helping maintain the internal storage temperatures.

The insulation is placed in at least two layers, which are cross-laid to minimise overlapping joints. A vapour seal is installed below the insulation to prevent interstitial condensation.

Sundolitt XPS is available in a range of compressive strengths up to 700kPa. It is suitable for use in Cold Store Floors where high racking systems are installed and can withstand trafficking from fork lift trucks.



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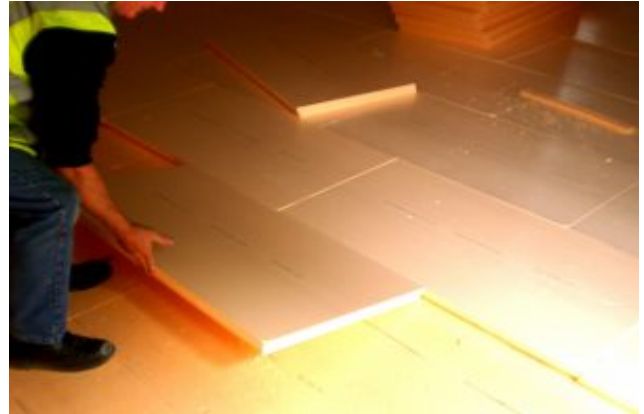
Installation

Sundolitt XPS is easily installed and cut to size with a fine toothed saw. There are no special requirement for PPE when handling or cutting XPS.

For Cold Store applications it is recommended that rebated edge boards are specified. It is also recommended that the insulation is built up in multiple layers, cross laid.

The high variance in temperature between the ground or air and the internal cold room create a high risk of problems caused by thermal bridging. It is therefore important to reduce this risk as much as possible by breaking up alignment of board joints.

Sundolitt XPS Flooring should always be placed over a vapour seal and laid on a level and even surface. A sheet material may be placed over the insulation to prevent grout ingress during the installation of the concrete over-slab.



| Thermal Resistance Values (m ² K/W) | | | | |
|--|--------|--------|--------|--------|
| Thickness (mm) | XPS200 | XPS300 | XPS500 | XPS700 |
| 30 | 0.909 | 0.909 | | |
| 40 | 1.212 | 1.212 | | |
| 50 | 1.515 | 1.515 | 1.471 | 1.471 |
| 60 | 1.765 | 1.765 | 1.765 | 1.765 |
| 75 | 2.206 | 2.206 | | |
| 80 | 2.353 | 2.353 | 2.353 | 2.353 |
| 100 | 2.778 | 2.778 | 2.778 | 2.778 |
| 120 | 3.077 | 3.077 | 3.077 | 3.077 |
| 130 | 3.333 | 3.333 | 3.333 | 3.333 |
| 140 | 3.590 | 3.590 | 3.590 | 3.590 |
| 150 | 3.846 | 3.846 | 3.846 | 3.846 |
| 160 | 4.103 | 4.103 | 4.103 | 4.103 |

Standard Sizes Available

| Dimensions (mm) | Length | Width |
|-----------------|--------|-------|
| Rebated Edge | 2385 | 585 |
| Square Edge | 2400 | 600 |

| | |
|-----------|---|
| Thickness | 30, 40, 50, 60, 75, 80, 100, 120, 130, 140, 150 and 160mm |
|-----------|---|

Accreditation

Sundolitt XPS Flooring is manufactured in accordance with BS EN ISO 13164.



QMS
ISO 9001
Registered Company



EMS
ISO 14001
Registered Company

EPD Certificate – nepd-396-274-EN – demonstrates the excellent environmental performance of Sundolitt XPS which has emissions of 0.0073 kg CO₂ calculated in accordance with ISO 14025.

Sundolitt XPS Flooring - Physical Properties

| | XPS200 | XPS300 | XPS500 | XPS700 |
|---|--------|--------|--------|--------|
| Design Load at 2% nominal Compression (kPa) | 90 | 140 | 225 | 250 |
| Compressive Strength at 10% nominal Compression (kPa) | 200 | 300 | 500 | 700 |
| Thermal Conductivity (W/mK) at 50mm thickness | 0.033 | 0.033 | 0.034 | 0.034 |

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