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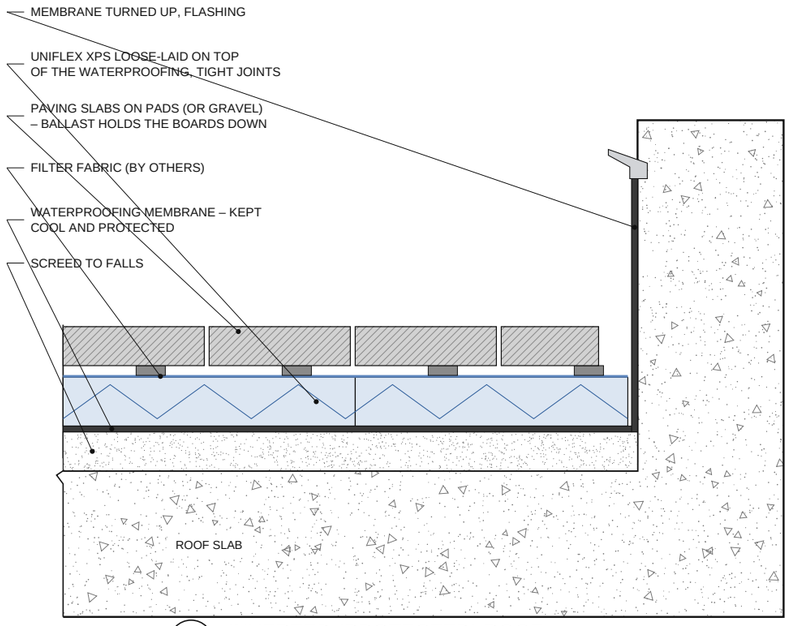
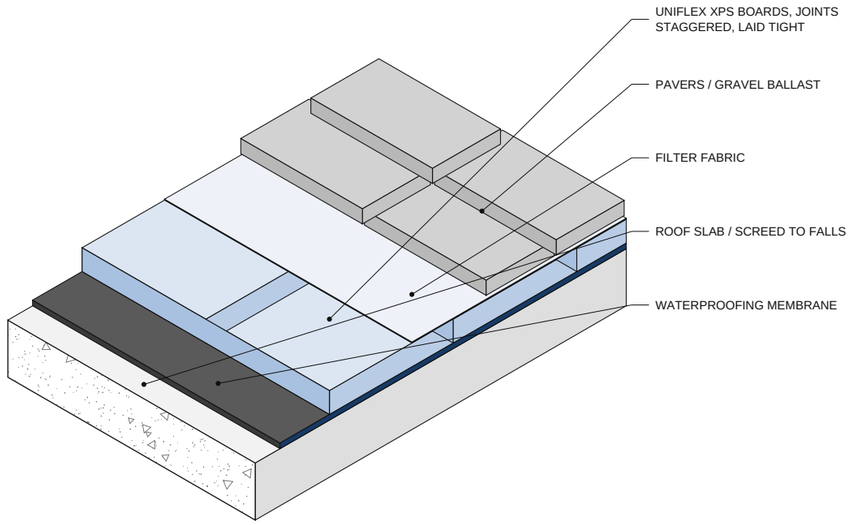


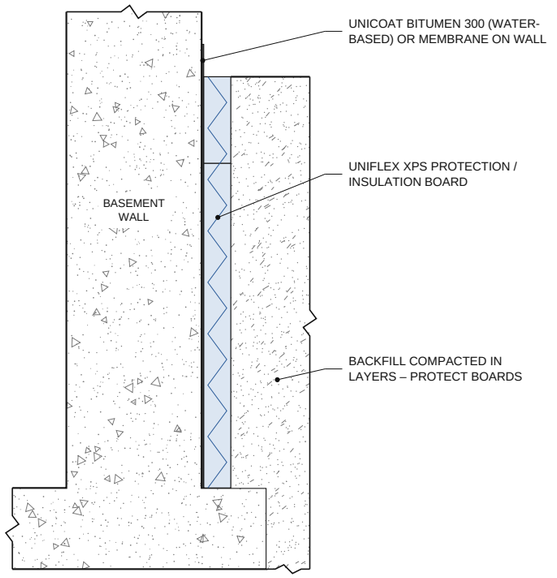
1 INVERTED (PROTECTED) ROOF

SECTION – INSULATION ABOVE THE MEMBRANE



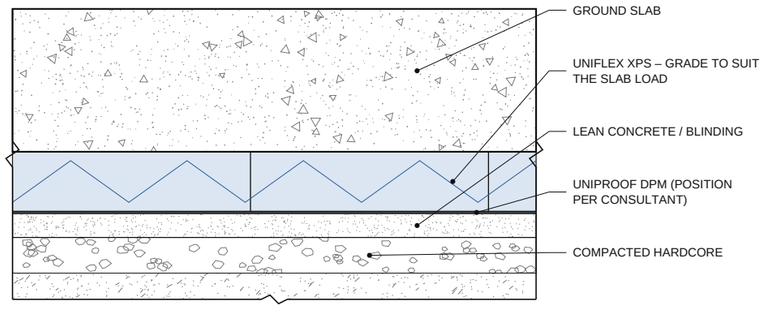
2 INVERTED ROOF BUILD-UP

3D VIEW – LAYERS CUT BACK, THICKNESS EXAGGERATED



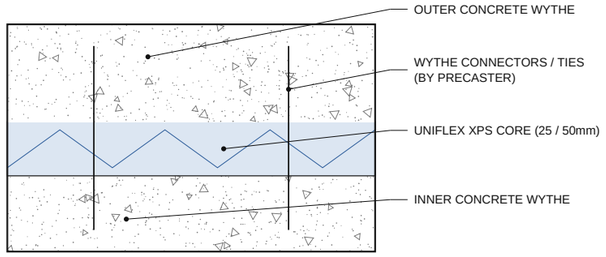
3 BASEMENT WALL

SECTION – EXTERNAL INSULATION



4 UNDER-SLAB INSULATION

SECTION – GROUND-BEARING SLAB



5 PRECAST SANDWICH PANEL

SECTION – XPS PLACED DIRECTLY IN THE CASTING

UNIFLEX XPS (REFER TO TDS)

PROPERTY	XPS 250	XPS 450
Density, kg/m³	32 – 36	40 – 45
Compressive, kPa	≥ 250	≥ 450
Water abs., % v/v	0.10–0.35	0.10–0.35
Conductivity, W/mK	≤ 0.028	≤ 0.028
Dim. stability, %	≤ 2.0	≤ 2.0
Flammability (UL94)	HB	HB

Boards 25 / 50mm thick; 1200 x 2400 or 600 x 1200mm.
R-value: 25mm = 0.89, 50mm = 1.79 m²K/W.
Use XPS 450 under heavily loaded floor slabs.

No solvent-based coating, primer or adhesive in contact with XPS – solvents dissolve polystyrene.

GENERAL NOTES (FOR GUIDANCE ONLY)

1. UNIFLEX XPS is a closed-cell extruded polystyrene board: thermal conductivity ≤ 0.028 W/mK, low water absorption. R-value 0.89 m²K/W (25mm), 1.79 m²K/W (50mm).
2. Inverted (protected) roof: the waterproofing goes on the slab and the XPS is loose-laid on top with tight, staggered joints, then filter fabric and ballast (pavers on pads or gravel) to hold the boards against wind uplift and flotation. Ballast weight, falls and drainage by the consultant.
3. Keep solvent-based coatings, primers, adhesives and sealants away from XPS – solvents dissolve polystyrene. Use water-based products such as UNICOAT BITUMEN 300.
4. Under slabs: lay on a level, compacted base with joints tight and staggered; protect the boards from traffic and damage until the slab is cast.
5. Walls: fit boards tight against the coated wall, joints staggered; backfill in compacted layers without damaging the boards.
6. Select the grade (XPS 250 / 450) and thickness to suit the load and the required thermal performance – by the consultant.
7. XPS is combustible (UL94 HB): do not leave it exposed inside buildings; fire protection and cover by the consultant.

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This drawing is a generic product illustration. It is NOT an engineering design and has not been prepared, checked or endorsed by a professional engineer. Unity Reliance (M) Sdn Bhd is a product supplier, not a design consultant. All sizes, bedding thickness, edge distances, reinforcement, dowels and installation details shall be designed, verified and approved by the project's qualified engineer. Unity Reliance (M) Sdn Bhd accepts no responsibility for structural design, site conditions, workmanship, or any loss or damage arising from the use of this drawing. Product supply is governed by the relevant TDS and terms of sale.

REVISIONS

REV	DATE	DESCRIPTION
0	29/10/26	FIRST ISSUE
A	13/11/26	XPS 450 ≥ 450 kPa; NO XPS 350

PRODUCT
UNIFLEX XPS 250 / 450 THERMAL INSULATION BOARD

DRAWING TITLE
UNIFLEX XPS THERMAL INSULATION ROOF, SLAB, WALL & PRECAST

DRAWING NO.
UR-FL-04

REV
A

SCALE	SIZE	DATE	DRAWN
NTS	A3	13/11/26	UR

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