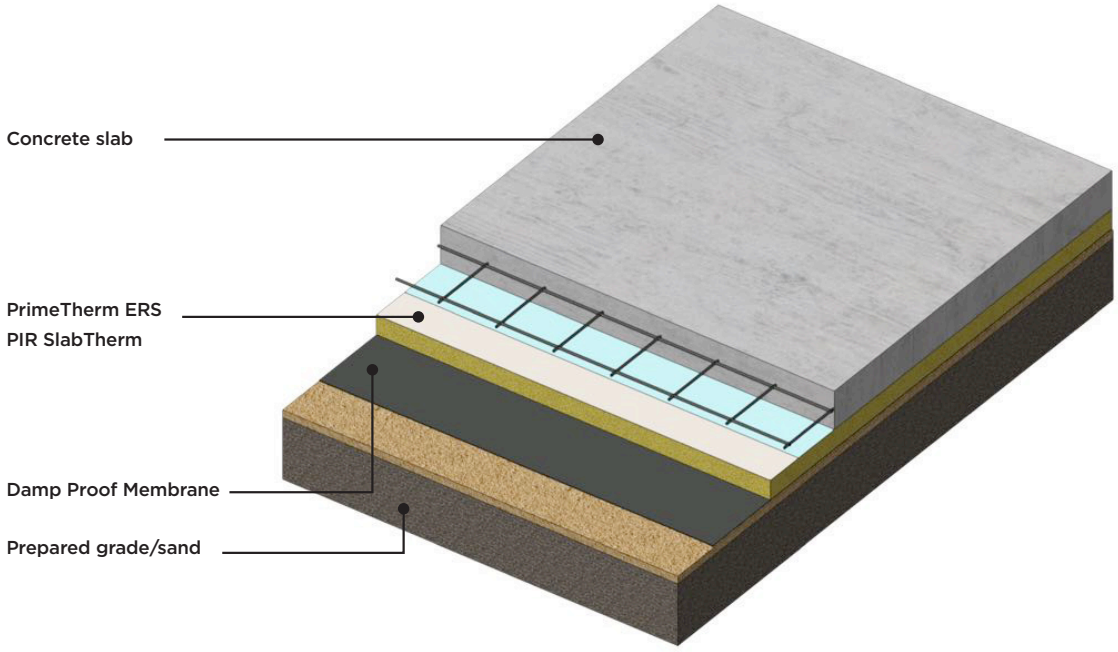
MASONS PrimeTherm ERS SlabTherm Insulation

DESIGN AND INSTALLATION GUIDE

MASONS
Designed Smart, Built Tough.

V1.0 Dec 2025



PRODUCT NAME

Masons PrimeTherm ERS SlabTherm

DESCRIPTION AND INTENDED USE:

PrimeTherm ERS SlabTherm is a closed-cell sheet insulation manufactured from rigid thermosetting polyisocyanurate (PIR) closed-cell foam.

PrimeTherm ERS SlabTherm is available in sheets 2400mm x 1200mm (2.88m2), thickness range 50mm - 140/150mm.

PrimeTherm ERS SlabTherm is intended to be installed as concrete floor insulation.

MECHANICAL PROPERTIES & THERMAL PERFORMANCE – R-VALUES

Facing Type	0.022 W m-k thickness in mm	R Value after aging* (estimated)	Density kg/m³	Compressive strength KPA
All	50	2.03	40	158
All	80	3.24	40	158
All	100	4.05	40	158
All	120	4.86	40	158

* What is the Aged R Value? R Value is a measure of thermal resistance -R.

PIR board R values reduce slowly post production. Typical PIR board R value reduction is thiner boards up to >13-15%. Thicker boards circa >10% R values stabilise after approx. 2 years.

Building designers use aged R values for an accurate thermal modelling of the building performance.

EXAMPLE OF COMPLIANCE:

Based on a building in zone 1 with an area / perimeter ratio of 2.4 (subject to project specific detailing) you are likely to achieve at least the minimum requirement of R1.5 for both a Conventional or Raft slab construction. Add SlabTherm for increased thermal construction values.

KEY BENEFITS:

PrimeTherm ERS SlabTherm is designed for New Zealand conditions, increasing thermal performance by protecting the concrete slab from heat-loss. Improves energy efficiency to decrease heating and cooling costs over the life of the building. Reduces the need for in-slab heating with no ongoing costs.

RELEVANT BUILDING CLAUSES

- **H1 – Energy Efficiency** - Performance clauses H1.3.1(a) and H1.3.2E

This product is intended to be used as part of a floor system.

- **H1.3.1(a) and H1.3.2E:** This insulation product forms part of the building envelope enclosing spaces where the temperature or humidity (or both) are modified. In conjunction with other building elements, it contributes to providing thermal resistance to the building envelope for the purposes of achieving adequate energy efficiency.

LIMITATIONS ON THE USE OF PRIMETHERM ERS SLABTHERM:

Masons recommend specification and installation by Licensed Building Practitioners with product and application experience.

- Successful installation requires technical knowledge, including project-specific design requirements.
- PrimeTherm ERS SlabTherm contributes to satisfying building code requirements as part of a system that is designed, installed, and maintained in accordance with product literature and project specifications.
- Ensure compatibility with other materials used in the floor build up
- Must be protected from prolonged UV exposure before and after installation in it's raw state.

DESIGN REQUIREMENTS SUPPORTING THE USE OF PRIMETHERM ERS SLABTHERM:

Design compressive stress on PrimeTherm ERS SlabTherm arising from self-weight gravity and imposed loads. Design applications to match the intended use as under slab insulation. Installation to be performed by experienced licensed building practitioners in accordance with installation instructions as follows.

DESIGN CONSIDERATIONS:

- **Thermal Performance** – select board based on climate zone and required R value. Account for any areas of thermal bridging. Use in conjunction with slab edge insulation to maintain continuity of the thermal envelope.
- **Moisture Control** – install over a compliant DPM in accordance with NZBC E2 and B2.
- **Fire Safety** – once encased in concrete the product presents minimal fire risk.

INSTALLATION INSTRUCTIONS:

- Prepare, level and compact the sub-grade ensuring free from sharp objects
- Line the slab area with dampproof membrane (e.g. polythene) with overlaps taped and edges turned up perimeter formwork.

- Lay PrimeTherm ERS SlabTherm sheets over DPM, cutting to fit around slab penetrations. Stagger joints and butt tightly to avoid gaps.
- Install slab edge insulation if specified.
- For aluminium foil faced boards tape joints with Masons aluminium foil tape. For other facing types joint boards with Soudal Gorilla Pro click & fix
- Place mesh chairs and reinforcing mesh as required.
- Pour concrete evenly to avoid board displacement or lifting and level the concrete slab.
- **Health & Safety:** Refer to the PrimeTherm ERS SlabTherm MSDS for detailed safety instructions
- **Limitations:** Refer to the Masons PrimeTherm ERS SlabTherm BPIR

HEALTH AND SAFETY AT INSTALLATION

- Refer to the Masons PrimeTherm ERS MSDS for detailed safety instructions

ENVIRONMENTAL DATA:

See PrimeTherm ERS SlabTherm MSDS. Contain off-cuts in bags to ensure product is not blown away or can enter waterways. PT ERS SlabTherm Insulation Board is typically not recyclable, but may be re-used or up cycled into other products. Check with the local council or recycling service provider for options.

MAINTENANCE REQUIREMENTS:

PrimeTherm ERS SlabTherm does not require regular maintenance. Damaged, dented, fractured product must be replaced.

PRODUCT IDENTIFIER:

A label is supplied on each sheet and pack and contains Masons PrimeTherm ERS PIR Board.

25660