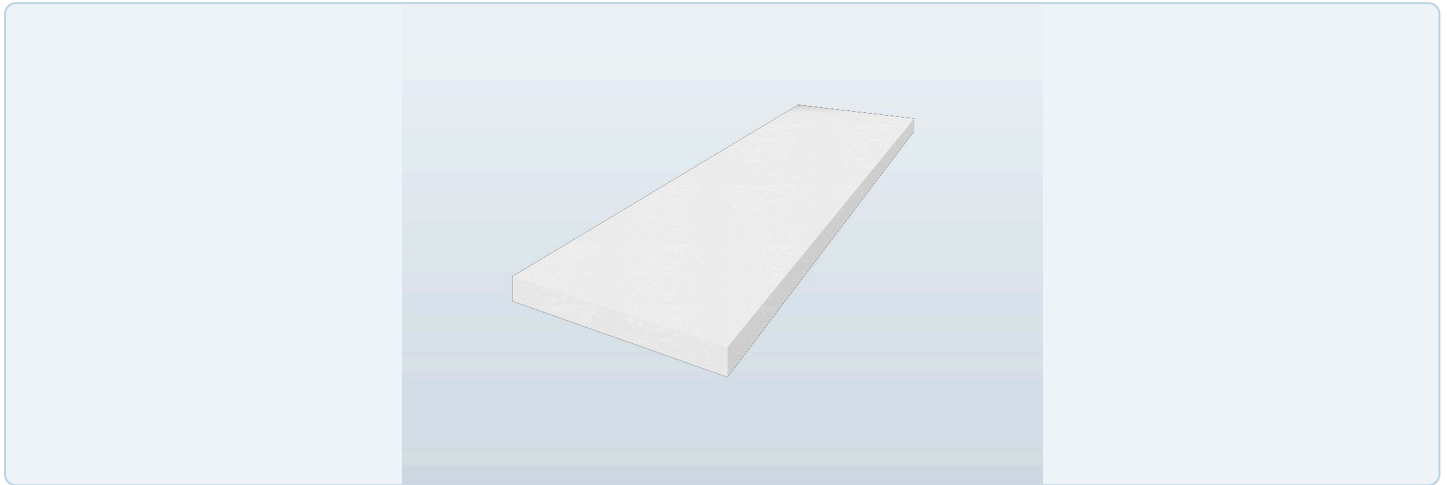


Bulk Insulation — FR EPS Flat Sheeting

Fire-retardant EPS flat boards in five density grades for building, roofing and civil thermal insulation



Overview

Technopol SA's core product: rigid, closed-cell, fire-retardant expanded polystyrene (EPS) supplied as bulk flat sheets and boards for thermal insulation across construction, roofing, cladding and civil work. Five density grades (EPS 12 to EPS 30) each pair a defined density with a thermal conductivity (λ) and compressive strength, so the specifier balances insulation performance, load capacity and cost. EPS is lightweight, non-hygroscopic (does not absorb water), mould- and moisture-resistant, and easy to cut and handle on site. Boards are cut to size on demand and support SANS 10400-XA energy-efficiency (deemed-to-satisfy R-value) compliance. The range is complemented by PIC 35 (PIR) and Stone Wool board for high-performance or fire-rated systems.

Applications

- Cavity-fill wall insulation
- Under-slab and under-screed insulation
- Roof and wall thermal insulation
- Cold-room and cladding systems (as EPS core / board)
- Substrate boards for EIFS / plastered (ETICS) systems
- Geofoam and civil-engineering fill (see geofoam range)
- Packaging, loose-fill and void fill
- Cut-to-size sheeting for panels, cornices and void formers

Benefits

- Five density grades let you tune λ , compressive strength and cost to the application
- Non-hygroscopic closed-cell structure — does not absorb water and resists mould
- Very low self-weight; cut on site with hot-wire, hand saw or knife
- Supports SANS 10400-XA energy-efficiency (deemed-to-satisfy R-value) compliance
- Current SANS 53501-1 reaction-to-fire class B-s1,d0 on the tested FR grade
- Same base material as Technopol's panels, cornices and geofoam — one supply chain

Specifications

Material	Fire-retardant expanded polystyrene (FR EPS), rigid closed-cell board
Density grades	EPS 12 / 15 / 20 (SD) / 24 (HD) / 30 (EHD) — 12 to 30 kg/m ³
Thermal conductivity λ (max @10 °C)	0.033 (EPS 30) to 0.045 (EPS 12) W/m·K
Compressive stress @10% strain (min)	EPS 30 ≥ 200 · 24 ≥ 160 · 20 ≥ 110 · 15 ≥ 65 · 12 ≥ 60 kPa
Safe working load @1% strain (min)	15–100 kPa across grades (use for sustained structural loads)
Indicative R-value at 50 mm	EPS 30 ≈ 1.52 · EPS 20 ≈ 1.43 · EPS 12 ≈ 1.11 m ² ·K/W (R = thickness \div λ)
Reaction-to-fire class	SANS 53501-1 (Euroclass) B-s1,d0 — current, tested FR EPS 20DV grade
Service temperature	80 °C long term / 100 °C short term
Cut-to-size	Hotwire working area up to 3000 × 1240 mm, 10–1030 mm thick
Complementary boards	PIC 35 (PIR, $\lambda \leq 0.025$ W/m·K); Stone Wool 120 kg/m ³ ($\lambda \leq 0.035$, non-combustible)

Fire & compliance: EPS is an organic, combustible material; its value here is a reaction-to-fire classification, not non-combustibility. The FR grade carries a current SANS 53501-1 (Euroclass) Class B-s1,d0 rating (Ignis Testing report IT 23-08-00009 on EPS FRCel 20DV, valid to ~Aug 2028) — lowest smoke, no flaming droplets. This reaction-to-fire class is not a fire-resistance rating (FRR): plain bulk EPS board carries no FRR, which is a system property achieved only in specific tested assemblies.

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