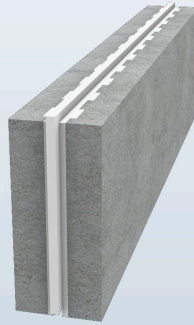


## LiteCore Building System (LiteCore Bricks)

Agreement-certified lightweight EPS-core walling — R2.30, fast to build, conventional plastered finish



### Overview

LiteCore is Technopol SA's Agreement-certified (2020/609) lightweight walling system: cast bricks and blocks of a strong, low-density EPS-beaded foamed-cement matrix used as a non-load-bearing infill wall within a light steel frame (SANS 517) or a reinforced-concrete frame. Large 1200 x 340 mm blocks lay fast by hand in stretcher bond with LiteCore Bond thin-bed adhesive mortar and take a conventional plastered "touch-and-feel" finish (LiteCore Plast on alkali-resistant mesh), delivering a certified whole-wall R-value of 2.30 m<sup>2</sup>.K/W at a fraction of conventional masonry's wall mass. Internal blocks are 100 mm solid foamed cement; external blocks are a 150 mm composite with a moulded CavityLite EPS core. The system is SANS 10400-XA and SANS 204 energy-compliant (insulated ceilings mandatory in all instances) and is made with virgin or recycled EPS beads, supporting Technopol's zero-landfill goal.

### Applications

- Non-load-bearing infill walls built into a light steel frame (SANS 517) or reinforced-concrete frame
- Single- and multi-storey buildings in all regions of South Africa (multi-storey and walls over 3500 mm under a competent engineer)
- Houses, dwellings, dormitories and hostels (H2/H3/H4)
- Schools and places of instruction, plus places of worship (A3/A4)
- Offices and low-to-moderate-risk commercial premises (G1/B2/B3)
- Shops, wholesalers' stores and light-industrial facilities (F1/F2/F3, D2/D3)
- Hospitals and places of detention (E2/E1)
- Energy-efficient walling where passive thermal comfort and low wall mass matter

### Benefits

- Certified whole-wall R-value of 2.30 m<sup>2</sup>.K/W — SANS 10400-XA and SANS 204 energy-compliant
- Lightweight at roughly 18.8-22.2 kg per brick, cutting wall mass and structural/foundation load versus conventional masonry
- Fast, low-labour installation with hand tools: large 1200 x 340 mm blocks, tongue-and-groove interlock and thin-bed LiteCore Bond mortar in stretcher bond
- Conventional plastered finish (LiteCore Plast over alkali-resistant fibreglass mesh) for a familiar touch-and-feel result
- Backed by Agreement South Africa certificate 2020/609 — a strong compliance and trust signal
- Made with virgin or recycled EPS beads, supporting an environmentally responsible, zero-landfill approach

### Specifications

Block dimensions	1200 mm (L) x 340 mm (H); width 100 mm (internal) or 150 mm (external)
Internal block	100 mm solid foamed cement (no EPS core)
External block	150 mm composite: 60 mm CavityLite EPS core at 15 kg/m <sup>3</sup> + ~45 mm lightweight-concrete skins each side (per Agreement)
Block density	400-450 kg/m <sup>3</sup> nominal (measured dry QC samples ~490-600 kg/m <sup>3</sup> )
Mass per brick	~18.8-22.2 kg (mix-dependent)
Certified whole-wall R-value	2.30 m <sup>2</sup> .K/W (Agreement Table 2)
Compressive strength	> 1.0 MPa design value; <5 MPa certified upper bound (non-load-bearing)
EPS thermal conductivity (lambda)	0.033-0.045 W/m.K by EPS grade (EPS component only)
Acoustic performance	R <sub>w</sub> 45-48 dB; D <sub>nT,w</sub> ~45 dB between rooms (SANS 10218-1)
Wall dimensional limit	3500 mm (larger walls are a professional engineer's responsibility)
Mortar / render	LiteCore Bond thin-bed adhesive; LiteCore Plast plaster — external min 12 mm, internal 5 mm
Fire class	Reaction-to-fire B-s1,d0 (EPS FRCel, LiteSpan Panel 150); tested FR60 load-bearing (FT 24-003,

**Fire & compliance:** Keep reaction-to-fire and fire-resistance distinct: Agreement 2020/609 gives LiteCore external walls a regulatory deemed-to-satisfy classification as non-combustible (type FRR) with a 120-minute fire-resistance rating under SANS 10400-T — this is a DtS classification, not a stand-alone test. The only currently valid independent fire-resistance test on a LiteCore assembly is FT 24-003 (NuClad LiteCore LSF wall) at FR60 load-bearing (E/I/R 60), and the EPS insulation carries a valid reaction-to-fire class of B-s1,d0 (FRCel EPS and LiteSpan Panel 150) — describing low smoke and no flaming droplets, not a fire-resistance rating. (ISO 9001/14001/45001 are lapsed and are not claimed as current; the Terraco A2-s1,d0 class applies only to a mineral-wool Terraco system, not to EPS/LiteCore.)

Request a quote — [info@technopol.co.za](mailto:info@technopol.co.za) · +27 11 363 2780 · [technopol.co.za](http://technopol.co.za)