

LiteSpan Stone Wool Sandwich Panel (Flat and Deep Profiled)

Product description

LiteSpan Stone Wool Sandwich Panels are manufactured with either a Flat or Deep Profiled Roof (DPR) configuration, consisting of a stone wool core laminated between top and bottom galvalume-coated steel sheets. The panels provide a robust and thermally efficient building envelope solution, offering exceptional fire performance, acoustic insulation, and structural integrity.

The stone wool core is a high-density, resin-bonded slab with predominantly vertical fibre orientation, optimising pressure resistance and load-bearing capacity. Panels are available in standard thicknesses of 50, 75, 100 and 150 mm.

Applications

- Temperature-controlled & cold rooms
- Laboratories and GMP areas
- Agricultural and industrial buildings
- Food processing areas
- Hospitals and clinics
- Indoor swimming pools
- Prefabricated or modular buildings
- Logistics centres and office buildings

Benefits

- **Fire resistant:** classified FR60 or FR30 for non-loadbearing applications per SANS 10177-2
- **Thermally efficient:** R-values up to 4.29 m²K/W for 150 mm panels
- **Durable:** chemically inert, rot-proof, mould and mildew resistant
- **Acoustic insulation:** excellent sound absorption from the stone wool density & fibre orientation
- **Recyclable:** CFC- and HCFC-free with full recyclability

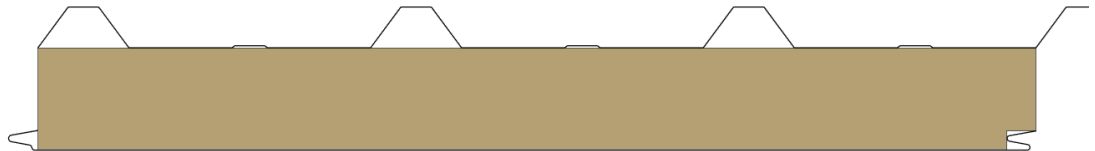
Basic technical parameters

Core thickness (mm)	Panel weight (kg/m ²)	'U' value (W/m ² .K)	'R' value (m ² .K/W)
50	13.55	0.70	1.43
75	15.93	0.47	2.14
100	18.30	0.35	2.86
150	23.05	0.23	4.29

Panel types

Deep Profiled Roof Panel (DPR)

990 mm cover · IBR ribs @ 330 mm centres · 44 mm crown · smooth / micro-pleated underside



Flat Panel

1145 mm cover · smooth / micro-pleated both faces · tongue-&-groove interlocking side-laps



System characteristics









- **Fire (100 mm panel):** meets all criteria for non-load-bearing systems — **SANS 10177 Part 2**. Fixed-joint system: **FR60** (single-storey external walls under light roof loads & internal walls; multi-storey internal/division/tenancy walls without service terminations). Unfixed-joint system: **FR30** for non-loadbearing internal & division walls. Test report available on request.
- **Steel:** Chromadek or similar skins in a range of colours; Z, AZ and ZAM coating specifications and thicknesses. Steel skin thickness 0.5 mm minimum.
- **Support structure:** steel purlins. Bearing width 50 mm minimum (varies with panel thickness). Pitch 4° minimum for DPR.
- **Cover width:** 990 mm (DPR) / 1145 mm (Flat). Panel thickness 50 / 75 / 100 / 150 mm.
- **Fasteners:** Class 3/4 self-drilling Tek screws with seal, fix-through. Three fasteners per support (centre of every trough for 990 DPR; three equally spaced for 1145 Flat).
- **Laps & closures:** end-lap 150 mm min; side laps stitched at 500 mm centres (Class 3/4 self-drilling stitching screw with seal); flashings/closures fixed at 500 mm centres.

Stone wool core properties

Property	Unit	Value	Standard
Density	kg/m ³	120	TS EN 1602
Compressive strength (10% def.)	kPa	120	TS EN 826
Tensile strength	kPa	≥15	TS EN 1607
Thermal conductivity (10°C)	W/mK	max 0.035	TS EN 12667
Reaction to fire	—	A1	TS EN 13501-1
Max operation temp.	°C	760	—
Melting point	°C	>1000	DIN 4102
Vapour diffusion resistance μ	—	1	TS EN 12086
Water absorption (short/long)	kg/m ²	<1 / <3	TS EN 1609/12087

Colours

Steel skins are available in the following colours:

	Colour name	RAL code
	Dove Grey	7042
	Basalt Grey	7012
	Dark Dolphin	7031
	Sandstone Beige	1002
	Signal Brown	8002
	Anthracite Grey	7016
	Frost White	9016
	Quartz Grey	7039