

# CEMINTEL<sup>®</sup>

## SURROUND

### NEW ZEALAND TECHNICAL DATA SHEET

#### PANEL DESCRIPTION / COMPOSITION

CEMINTEL SURROUND™ PANELS ARE PREFINISHED FIBRE CEMENT PANELS THAT ARE COLOURED THROUGHOUT WITH AN OPAQUE COATING WHICH RESULTS IN A MORE NATURAL APPEARANCE AND DEPTH OF COLOUR THAN CAN BE ACHIEVED WITH A STANDARD SURFACE PAINTED FINISH.

CEMINTEL<sup>®</sup>  
SURROUND

Consisting primarily of Portland Cement, wood pulp, reinforcement fibres, air and water, panels have undergone a longer, natural air curing process and offer superior performance in terms of strength, density and durability. Available in a range of colours, textures & finishes, these square edged panels are manufactured in Europe under EN 12467 (fibre cement flat sheets) and are classified as Category A (for weather resistance), Class 4 (mechanical properties).

#### APPLICATIONS

	Result
Applications	Facades & Cladding, Internal Linings
Type of Building Structure	Residential Housing Buildings within the scope of NZS 3604, Commercial & Other to maximum ULS Wind Pressures of $\pm 7.0$ kPa.
Wet Areas	No

#### PANEL – DIMENSIONAL & GEOMETRIC CHARACTERISTICS

Dimensions/Geometric Characteristic	Specification	Manufacturing Tolerance	Relevant Standard
Panel Width	1200mm	$\pm 1.5$ mm	
Panel Length	3000mm	$\pm 1.5$ mm	
Panel Thickness	8mm	$\pm 0.8$ mm	
Profile	Square Edge		
Perpendicularity/Squareness of edges		< 1mm/m	
Weight (typical)	15.7 kg/m <sup>2</sup> Based on dry weight		
Layout Options	Horizontal, Vertical, Angled, Curved (refer to State of Clad for custom solutions)		
Jointing	Expressed		

Trimmed & Sealed. Lengths of up to 3050mm are available as special orders.

#### PANEL – STRENGTH & MOISTURE RELATED PROPERTIES

Physical Property	Result	Relevant Standard
Modulus of Rupture (Wet)	>18 Mpa	EN 12467
Modulus of Elasticity (Wet)	13 Gpa	EN 12467
Density (Oven Dry)	1750 kg/m <sup>3</sup> (typical value)	EN 12467
Water Vapor Diffusion	400	EN 12572
Water Tightness (24hrs)	No water droplet	EN 12467
Water absorption (Saturated – 48hrs)	> 15% (typical value)	ASTM C 1186
Moisture Content (EMC)	< 8%	EN 12467
Moisture Movement	< 0.15%	EN 12467

Note: The above test results relate to coated panels unless otherwise specified (ie edges are sealed for testing to reflect the characteristic of sheets as delivered & in accordance with installation instructions).

**PANEL – OTHER DURABILITY/WEATHER RESISTANCE INDICATORS**

Test	Result	Relevant Standard
Heat Rain	PASSED (50 Cycles)	EN 12467
Freeze Thaw	PASSED (100 Cycles)	EN 12467
Warm Water Resistance	PASSED (56 Days)	EN 12467
Soak Dry	PASSED (50 Cycles)	EN 12467

**PANEL –FINISH CHARACTERISTICS**

Characteristic	Result	Relevant Standard
Finish	Pre-finished	
Coating Type	Polyacrylic	
Colour Bodied	Yes	
Paint Type	N/A	
UV Resistance	Colour Constancy to remain within 0.8 Delta E units compared to agreed prototype over 10 year period.	
Formaldehyde Emission Rate		
VOC Emission Rate		

**PANEL –SPECTRAL REFLECTIVITY VALUES**

Panel Colour	Solar Reflectance %	Solar Absorption %	Relevant Standard
Whiteish Base	67.9	32.1	ASTM E903-12
Whiteish Leather	67.9	32.1	ASTM E903-12
Whiteish String	67.9	32.1	ASTM E903-12
Greyish Base	31.9	64.1	ASTM E903-12
Greyish Leather	31.9	64.1	ASTM E903-12
Greyish String	31.9	64.1	ASTM E903-12
Blackish Base	16.1	83.9	ASTM E903-12
Blackish Leather	16.1	83.9	ASTM E903-12
Blackish String	16.1	83.9	ASTM E903-12
Greenish Base	19.6	80.4	ASTM E903-12
Greenish Leather	19.6	80.4	ASTM E903-12
Greenish String	19.6	80.4	ASTM E903-12
Blueish Base	21.5	78.5	ASTM E903-12
Blueish Leather	21.5	78.5	ASTM E903-12
Blueish String	21.5	78.5	ASTM E903-12
Mainland	38.4	61.6	ASTM E903-12
Volta	45.6	54.4	ASTM E903-12
Mete	46.8	53.2	ASTM E903-12
Husk	41.5	58.5	ASTM E903-12
Maya	52.3	47.7	ASTM E903-12
Garb	11.2	88.8	ASTM E903-12
Greenback	33.7	66.3	ASTM E903-12
Truss Grey	10.7	89.3	ASTM E903-12
Gauze	24.3	72.1	ASTM E903-12
Whiteout	72.1	27.9	ASTM E903-12
Hover	7.8	92.2	ASTM E903-12
Strike	49.3	50.7	ASTM E903-12
Aero	33.0	67.0	ASTM E903-12
Quinta	42.0	58.0	ASTM E903-12
Blackout	6.6	93.4	ASTM E903-12
Woodlot	11.2	88.8	ASTM E903-12

**PANEL – FIRE RESISTANCE, THERMAL & ACCOUSTIC PROPERTIES**

Characteristic	Result	Relevant Standard
<b>FIRE RESISTANCE</b>		
Combustibility	Non-Combustible Type A Classification tested in accordance with Appendix C 7.1 of C/AS2. (Table C1.3 of C/AS2)	ISO 5660
Group Number Classification	1S	ISO 5660
<b>THERMAL CONDUCTIVITY</b>		
Thermal Conductivity ( $\lambda$ -Factor)	$\approx$ 0.5-1.0 W/mK	N/A
Thermal Expansion Co-efficient	0.01 mm/mK	N/A
<b>ACOUSTIC VALUE</b>		
Sound reduction (Depends on construction)	$\approx$ 3-5 dB	EN 12467

**SYSTEM SOLUTIONS**

Characteristic	Result	Relevant Standard
Within Scope of NZS 3604?	YES	
Suitable for use in NZS 3604 Wind Zones	Low, Medium, High, Very High, Extra High (Also suitable for Specific Engineering Design areas subject to maximum wind pressures).	E2/VM1 and AS/NZS 4284
Weatherproofing	Has Passed testing at a serviceability wind pressure of $\pm$ 2.5 kPa and an ultimate wind pressure of $\pm$ 7.0 kPa	AS/NZS 4284
Fire Resistance Limits (FRLs)	Up to 180/180/180	Refer to Gib Fire Rated Wall Systems book (GBUW 30a, 30b, 60, 90, 120 or 180)

**FIXING**

Characteristic	Specification
Maximum Span (Stud Spacing)	Up to 600mm
<b>DIRECT FIX</b>	
Nail to Timber Frame	NO
Screw to Timber Frame	NO
Screw to Steel Frame	NO
<b>CAVITY FIX</b>	
Timber Frame	YES
Steel Frame	YES
Masonry Frame	YES
<b>EXPOSED FASTENERS</b>	
Screw	NO
Rivet	YES
Nail	NO
<b>CONCEALED FASTENERS</b>	
Clip	NO
Countersunk Screw/Nail	NO
Adhesive, Split Batten Etc	YES – Internal Installation Only
Hidden by Overlapping Panel	NO
Flush Jointed (Taped)	NO

**WARRANTY****15 YEARS**

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