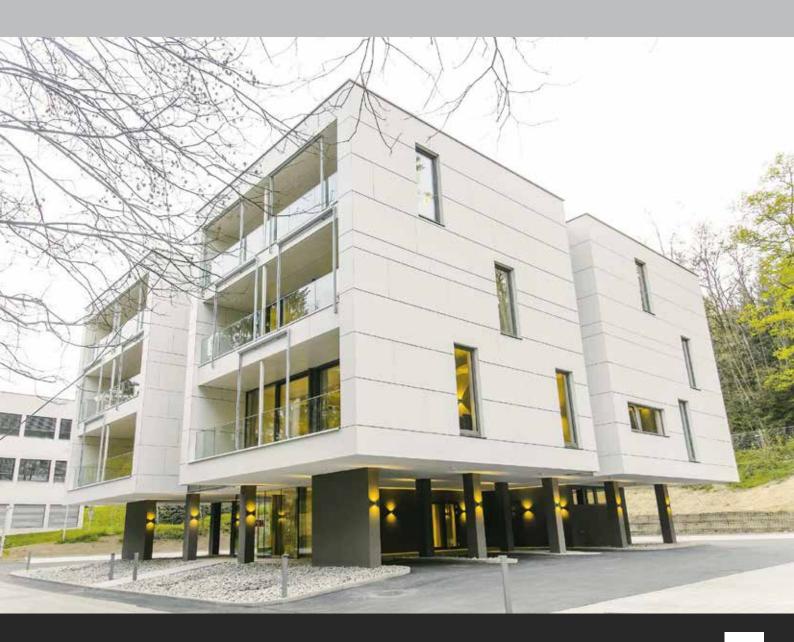
Fire Performance of Cemintel Surround™



C F M I N T E L

COMPLIANCE FOR NON-COMBUSTIBLE MATERIALS SURROUND™ - JANUARY 2018

Cemintel® is an Australian owned company and part of the iconic CSR Building Products Pty Ltd, manufacturing and supplying cement panels and building systems used for external facades, internal linings, ceilings and flooring in commercial and residential applications.

The following information is provided in regards to Cemintel Surround™ and its non-combustible attributes:

- Cemintel Surround is made from cement, wood pulp, reinforced fibres, air and water.
- Cemintel Surround is naturally air cured.
- Cemintel Surround is manufactured in Europe to EN 12467 (fibre cement sheets) and is tested in accordance with Australian and New Zealand Standard for cellulose-cement flat sheet product AS/NZS 2908.2
- In accordance with the standard characteristic type tests required by AS/NZS 2908.2:2000, Cemintel Surround has a classification of Type A Category 5 (fibre cement) sheet.
- Cemintel Surround may be used where non-combustible materials are required by the Building Code of Australia (BCA) and according to the National Construction Code (NCC) Volume 1 Section C1.9 and Volume 2 Section 3.7.1.2.
- Cemintel fibre cement products have been assessed by Exova (WFRA 45759) in accordance with AS/NZS 3837 ('Method test for heat and smoke release for materials and products using an oxygen consumption calorimeter') and have been classified to conform to Group 1 (high and best result possible) with an average specific extinction area far lower than the permissible 250m²/kg, as referenced in specification C1.10 of the BCA.

For further information on Cemintel Surround, please refer to Compliance Certificate and Certificate of Physical Properties attached.

COMPLIANCE CERTIFICATE

SURROUND™ - JANUARY 2018

Surround panels are manufactured in Europe and are tested to AS/NZS 2908.2:2000 and are classified as Type A Category 5 (fibre cement) sheet.

Characteristic Type Tests have been conducted for Surround in accordance with AS/NZS 2908.2:2000 including:

- Bending Strength
- Water Permeability
- Frost Resistance (Freeze Thaw test)
- Warm Water
- Heat Rain

- Soak Dry
- Dimensional and Geometrical
 - Characteristics
- Apparent Density

These tests have been conducted by Cemintel's Research & Development Technical Team. Detailed Technical Specifications for Surround panels can be downloaded at www.cemintel.com.au/technical/technical-data-sheets/

CERTIFICATE OF PHYSICAL PROPERTIES

SURROUND™ - JANUARY 2018

| PANEL - STRENGTH & MOISTURE RELATED PROPERTIES | | | |
|--|------------------|-------------------|--|
| Physical Property | Result | Relevant Standard | |
| Modulus of Rupture (Wet) | > 18 Mpa | AS2908.2 | |
| Modulus of Elasticity (Wet) | 9-13 Gpa | AS2908.2 | |
| Density (Oven Dry) | 1750 Kg/m³ | AS2908.2 | |
| Water Vapor Diffusion | Not required | Not required | |
| Water Tightness (24hrs) | No water droplet | AS2908.2 | |
| Water Absorption (Saturated - 48hrs) | 18 Wt% | ASTM C 1186 | |
| Moisture Content (EMC) | 7 Wt% | ASTM C 1186 | |
| Moisture Movement | 0.04% | ASTM C 1186 | |

CERTIFICATE OF PHYSICAL PROPERTIES

SURROUND™ - JANUARY 2018

| PANEL - OTHER DURABILITY/WEATHER RESISTANCE INDICATORS | | | |
|--|--------------------|-------------------|--|
| Test | Result | Relevant Standard | |
| Heat Rain | PASSED (25 Cycles) | AS2908.2 | |
| Freeze Thaw | PASSED (50 Cycles) | AS2908.2 | |
| Warm Water Resistance | PASSED (56 days) | AS2908.2 | |
| Soak Dry | PASSED (25 Cycles) | AS2908.2 | |

| PANEL - FIRE RESISTANCE, THERMAL & ACOUSTIC PROPERTIES | | | | |
|--|---|-------------------|--|--|
| Characteristic | Result | Relevant Standard | | |
| FIRE RESISTANCE | | | | |
| Combustibility | Assessed as suitable for use in applications where non-combustible materials are specified by the Deemed to Satisfy Provisions. | | | |
| Group Number | 1 | AS/NZ 3837 | | |
| Average Specific Extinction Area | <250 | AS/NZ 3837 | | |
| E.F.H.I | Ignitability index = 0 Flame spread index = 0 Heat evolved index = 0 Smoke developed = 2-3 | AS/NZS 1530.3 | | |
| THERMAL CONDUCTIVITY | | | | |
| Thermal Conductivity (λ-Factor) | 0.5 - 1.0W/mK | | | |
| Thermal Expansion Co-efficient | 0.01mm/mK | N/A | | |

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