

## Porta CUMARU fire resistance performance to comply with National Construction Code

**The fire hazard properties of Porta CUMARU have been tested and it has been confirmed that Porta Cumaru complies with many of the Deemed-to-Satisfy (DTS) requirements of the National Construction Code (NCC) for a range of Building Classes, locations and surfaces. The NCC is also referred to as the BCA or Building Code of Australia.**

As an internal wall & ceiling lining, Porta CUMARU is suitable for all areas, excluding fire isolated areas and public corridors not fitted with sprinklers.

As an external attachment application (cladding), Porta Cumaru can be used for buildings up to 25m in height in low-rise construction.

The term Fire Hazard Properties is a defined term in the NCC (Vol 1, Spec C1.10 & C1.10a) or is assessed by fire engineers in a Performance Solution approval.

While the Fire Hazard Properties of Porta Cumaru are similar to Spotted Gum, Porta Cumaru offers a superior Spread of Flame index performance.

### **National Construction Code or Building Code Australia**

The National Construction Code (NCC) Vol 1 regulate materials that are used in construction components of 'Apartments and Commercial buildings' (Class 2 to 9 buildings; not single-family homes). The required performance is set out in 'Specification C1.10'.

Specification C1.10 places limits on the fire hazard properties for various types of buildings and locations within these buildings, floor, wall and ceiling coverings.

**Timber internal wall and ceiling linings are required to meet different prerequisites for different building types (Classes), locations within the building and whether it has sprinklers or not. See NCC C1.10 Clause 7, Table 3. Porta Cumaru may be used for most areas excluding fire isolated areas & some public corridors not fitted with sprinklers.**

Materials used for wall and ceiling linings are required to have a different Group Number dependent on whether the building is fitted with sprinklers or not fitted with sprinklers. In general, all timber species including Porta CUMARU have a Group Number 3 performance.

**Porta Cumaru can be used as a timber facades (cladding) on up to and including 3 storey buildings. The fire surveyor will provide the final approval.**

Refer to WoodSolutions Technical Design Guide 18, Table 1 (page 8) shows the required construction for various building types (Classes) of construction.

Test and comparison results:

Fire Property	Porta Cumaru	Spotted Gum <sup>1</sup>	Description	Australian Standard Test
Group Number	3	3	Index of the time to sudden ignition	AS 3837-1998 Method of test for heat and smoke release rates for materials and products using oxygen consumption calorimeter & AS 5637.1 Assessment of the data.
Average Extinction Rate	< 250 m <sup>2</sup> /kg	< 250 m <sup>2</sup> /kg	Smoke measured per mass loss of sample	
EFH Ignitability Index	12	13	Tendency of the material to ignite. Range 0 (low) – 20 (high)	AS 1530.3-1999 (2016) Methods for fire tests on building materials, components and structures Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release.
EFH Spread of Flame Index	0	3	Propensity to burn rapidly & spread. An index of 0 means flames will not reach the ceiling in 10sec of ignition Range 0 (low) – 10 (high)	
EFH Smoke Developed Index	3	3	Concentration of smoke. 0 (low) – 10 (high).	
Smoke Development Rate	8 %/min	< 750 %/min	Speed at which smoke increases for Floor Coverings.	
Critical Radiance Flux	5.5 kW/m <sup>2</sup>	≥4.5 kW/m <sup>2</sup>	Minimum radiant heat required to sustain burning for Floor Coverings. A higher figure is better.	

Source 1: WoodSolutions, Forest & Wood Products Australia Ltd

Full test reports for Porta Cumaru Fire Hazard Properties are available on request.

## FAQs

Q: What is the requirement for Wall & Ceiling Linings?

A: Material used for wall or ceiling lining is required to have a Group Number of 1, 2 or 3, and either for buildings without sprinklers, must have a Smoke Development Rate less than 100 or an Average Extinction Rate less than 250 m<sup>2</sup>/kg. Porta Cumaru exceeds these requirements.

Q: What is 'Fire Hazard Property'?

A: The term Fire Hazard Property is the deem-to-satisfy requirements of the BCA (Spec C1.10 & C1.10a). The performance requirements vary by Class of Buildings (residential & commercial uses) and where & how in the building (e.g. flooring or lining) the material is used.

Q: Is the BCA deem to satisfy requirements the only method of approval?

A: No, a certified fire engineer can assess the application and material and offer a performance based Alternative Solution for National Construction Code approval. Yet the standard & quickest method is to meet or exceed the provisions in the BCA.

**Contact Porta on 1300 650 787 or email [sales@porta.com.au](mailto:sales@porta.com.au)  
Visit [www.porta.com.au](http://www.porta.com.au)**