

Fire Resistance

"Fire Resistance" means the ability of a building component to resist a fully developed fire, while still performing its function. Fire resistance in the form of a fire rating, can be applied only to a total building element incorporating plywood eg. a fire door or a wall or roof system. A product cannot be fire rated.

Plywood is suitable as a material used in fire resistance components or structures providing it is combined with other materials so as to meet the fire resistant requirements. This can be achieved chemically, however the usual method is to combine plywood with non-combustible materials such as fibrous-cement or fire grade plasterboard.

The Building Code of Australia (BCA) is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia. The BCA includes a section on Fire Resistance, and designers and builders must ensure that their constructions satisfy this section.

There are 3 categories for plywood used in constructions : Floor Materials and Coverings; Wall and Ceiling Linings; and Other materials. The following tables list the properties for each of these types. For more information, you can download the "EWPA Fire Resistance" fact sheet from the EWPA web site.

Floor Materials and Coverings

Species	Thickness	CRF	Smoke development rate
Pine, Hoop – <i>Araucaria cunninghamii</i>	15mm or greater	Between 2.2 and 4.5	Less than 750 percent-minutes
Pine, Radiata – <i>Pinus Radiata</i>	17mm or greater		
Pine, Slash – <i>Pinus Elliottii</i>	17mm or greater		

Wall and Ceiling Linings

Species	Thickness	Group No.	Average Specific Extinction Area (m ² /kg)
Pine, Radiata – <i>Pinus Radiata</i>	6mm or greater	3	< 250
Lauan – <i>Shorea agsaboensis</i>			< 250
Pine, Hoop			82.4
Pine, Slash			96.0

Extract from the EWPA Publication "Facts About Plywood", courtesy of the EWPA