



Fire Resistance

Essentially there are two things to know about fire in connection with plywood used in residential and commercial building applications. These are the meanings of "fire resistance" and "early fire hazard index".

"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 quite acceptable 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.

"Early Fire Hazard Index" is a measure of the plywood's surface characteristics relating to spread of flame, heat evolved, smoke emission and ignition. A low index value indicates better early fire hazard properties.

The early fire hazard indices as defined in AS 1530 Part 3 for untreated pine plywood are given below. (Bracketed figures are the possible index range).

Ignitability index	(0-20)	14
Spread of Flame index	(0-10)	8
Heat evolved index	(0-10)	9
Smoke Developed index	(0-10)	2

Plywood possesses early fire hazard indices which enable it to be used untreated in most applications. Plywood is suitable for use in most building linings, walls, ceilings, partitions and floors. Building codes may restrict its use in areas of severe hazard such as flues, hearths, public exits, public corridors, lift wells and certain enclosed public areas and buildings.

Treatment of plywood by impregnation with fire retardant salts, to reduce the early fire hazard indices, is permissible, provided appropriate certification is achieved showing compliance with the building regulations.

The use of intumescent finishes and paints to reduce the early fire hazard indices is not acceptable under current building regulations.

Extract from the EWPAA Publication "Facts About Plywood", courtesy of the EWPAA.