



BRIDGES + BOARDWALKS + JETTIES

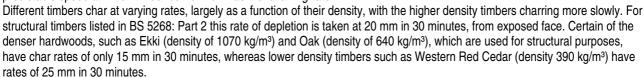
The behaviour of timber structures exposed to fire is an issue of major importance. How structures behave in the first and second phases of fire development is termed its reaction to fire. The reaction to fire of a structure is a measure of how easy it is to ignite that structure and also how easy that structure contributes to the fire development and spread. This may be important for the intended use of the structure or the influence of the fire on the structure's surroundings.

Once we reach the fully developed fire phase it is assumed that all combustible materials present are burning. We are therefore interested in the fire resistance of the structure, a measurement of the ability of a system to withstand fire.

Fire resistance is defined in BS4422:2005 as "the ability of an item to fulfil, for a stated period of time, the required fire stability and/or integrity and/or thermal insulation and/or expected duty specified in a standard fire resistant test". Fire resistance is therefore a property of the elements of an item and not its materials.

Structural elements are required to maintain their load bearing capability for the appropriate period and separating elements must resist the passage of fire or excessive heat. The principle is one of maintenance of structural stability and containment of the fire until fire fighting is successful.

Set against the complex interactions of an assembly and a mixture of materials is the predictable speed at which timber burns known as the 'charring rate'.





CHARRING RATE	Type of Timber	Charring per minute
	Softwood	0.80 mm
	Softwood Glue Laminated	0.70 mm
	Hardwood	0.55 mm

Bridges and structures supplied by Sarum Hardwood Structures are typically constructed in natural Ekki or Oak that we obtain from responsibly managed sources. Such hardwoods have qualities and characteristics that softwoods are unable to match.

Superior structural capabilities
Fire resistant and fire retardant qualities
Environmental tolerance
Vandal resistance
No preservative treatment required

If required, hardwood can be obtained from independently certified forests managed in accordance with the principles and criteria established by the Forest Stewardship Council and certificated with our Chain of Custody certificate No. SA-COC-001654 AV.



The mark of responsible forestry