

Fire Resistance Strength Fact!



Fire

Solid Timber is resistant to fire. It burns at a slow rate, and doesn't melt or suddenly collapse as steel can when heated. Fire needs air to burn and because solid timber has no middle air cavity like conventional building, timber has to burn from the outside in.

Resistance

When solid timber is exposed to high temperatures it will burn and begin to decompose to provide an insulating surface layer of char that retards further degradation of the wood. The rate of char on the outside of the timber log is initially fast but as the depth of char increases, the rate of char slows because of the increasing insulation provided.

Strength

Although Timber is a combustible material, when it burns, this surface layer of char is created which helps to protect and maintain the strength and structural integrity of the remaining unburned Timber beneath. Engineered pine solid wood walls have a char rate of 0.6mm per minute.

Fact

Most building fires are started by heat sources that ignite materials such as furnishings, curtains, synthetic carpets which can be highly flammable and it is these materials that emit toxic fumes that most often threaten life and limb. The building structure is usually not the first material ignited.

Science

***Solid Timber is an Insulator and a poor conductor of heat and electricity.
Wood is a much better insulator than steel, concrete and glass.***