

Simulated Bushfire Exposure on OZRoll® Window Shutters

OZRoll® approached CSIRO appraisals to determine the benefits of our window roller shutters on a domestic dwelling subjected to attack from a bushfire.

Simulated bushfire exposure was carried out with OZRoll® shutters covering a window compared with an unprotected window. A full documented report accompanied with a videotape of the tests was provided. The testing subjected the samples to a maximum radiant heat load that a building is expected to be subjected to in an area of high bushfire hazard, as defined in AS 3959, Construction of Buildings in Bushfire-prone areas – 1999.

The shutter whilst scorched had retained its integrity with no discernible buckling of the slats and only slight buckling of the head box. The shutter was still operable after the exposure although operation was slightly stiff due to partial deformation of the plastic pulley.

The unprotected window did not have the same success and cracking appeared very early on with the glass eventually exploding and falling out of the frame. It should be noted that there was no wind pressure on the unprotected window during this exposure. The gusting winds that generally accompany bushfires would cause a window with the same degree of cracking to fail considerably earlier it did in the no-wind laboratory exposure.

The conclusion was that OZRoll® window shutters provided complete protection from a simulated bushfire exposure with a maximum radiant heat flux of 29 kw/m² and still remained operable. Whereas the unprotected window suffered cracking at increasing frequency once the radiant heat flux surpassed 8 kw/m². The glass fell out of the frame 43 seconds after the peak exposure level was reached and would have been sooner had the wind been a factor.



CSIRO – Bushfire Simulation Testing on OZRoll® Window Shutters

It is common knowledge that hot or burning embers entering the home is a major factor for the ignition of the building itself. This factor is evident when you witness one home standing between two completely destroyed homes. The above test report proves conclusively that the home stands a better chance in case of bushfire if fitted with OZRoll® roller shutters.

REPORT NR BCE DOC .02/160 June 2002 CSIRO FSTL HR SPECIMEN ID 02/23

