



# BUSH FIRE RATING

In Western Australia, new construction work is required to comply with the performance requirements of the Building Code of Australia. The Building Code contains specific bushfire construction requirements for buildings in designated bushfire prone areas that aim to reduce the risk of ignition from embers to minimise risk to lives and property.

The primary concern of Australian Standard AS3959:2009 is to improve buildings in bushfire prone areas to withstand attack from a bushfire and provide a level of protection to the building occupants, as well as the building itself.

If you are not sure of the requirements for your area, you can check with your local council or fire authority.

For detailed explanations of what is specifically required for windows and doors for each of these ratings, please refer to the Australian Glass and Window Association:

[www.awa.org.au](http://www.awa.org.au)

Construction in Bushfire Prone Areas (AS 3959 - 2018) Requirements for Aluminium Windows and Doors					
BUSHFIRE ATTACK LEVEL	BAL - 12.5 Residential & Benchmark Product Range	BAL - 19 Residential & Benchmark Product Range	BAL - 29 Residential & Benchmark Product Range	BAL - 40 Commercial Grade Product Range	
Option A	<b>External Screen</b>				
	All windows and doors completely protected externally by mesh or perforated screens with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.  Glazing to comply with Australian Standards.	All windows and doors completely protected externally by mesh or perforated screens with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.  Glazing to comply with Australian Standards.	All windows and doors completely protected externally by mesh or perforated screens with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.  Glazing to comply with Australian Standards.	Fixed and openable portions must all be screened externally by mesh or perforated screens with a maximum aperture of 2mm, made from corrosion resistant steel or bronze.  Must be glazed in a minimum of 6mm toughened glass.	
	<b>Aluminium Windows</b>				
	Framing	Aluminium	Aluminium	Aluminium	Aluminium
	Glazing	Windows with sills less than 400mm from the ground, or other structure must be glazed in 4mm minimum safety glass.  Toughened or laminated.	All windows glazed in 5mm minimum toughened glass. Where annealed or laminated glass is used, it must be protected by an external screen.	All windows glazed in 5mm minimum toughened glass. Low level glazing must be protected by an external screen.	All windows glazed in 6mm minimum toughened glass.
	Hardware	Standard	Standard	Externally fitted hardware that supports the sash in opening and closing shall be metal unless shielded by framing components.	Externally fitted hardware that supports the sash in opening and closing shall be metal.
Option B	Seals	Standard	Standard	Standard	Seals (including glazing rubbers) to stiles, head and sills or thresholds must be made from silicone or have a flammability index less than 5
	Screening (Including Security)	Openable portions of window must be screened either internally or externally by mesh or perforated screens with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.	Openable portions of window must be screened internally or externally with mesh with a maximum aperture of 2mm, made of corrosion resistant steel, bronze or aluminium.	Openable portions of window must be screened internally or externally with mesh or perforated screens with a maximum aperture of 2mm, made of corrosion resistant steel, bronze or aluminium.  Low level glazing must be protected by an external screen.	Openable portions of windows must be screened internally or externally with mesh or perforated screens with a maximum aperture of 2mm, made of corrosion resistant steel or bronze.
	<b>Aluminium Doors - Hinged and Sliding Doors</b>				
	Framing	Aluminium	Aluminium	Aluminium	Aluminium. Sliding door panels must be tight fitting in the frames.
	Glazing	4mm safety glass as a minimum  Toughened or laminated.	5mm toughened glass as a minimum	6mm toughened glass as a minimum	6mm toughened glass as a minimum.
	Hardware	Standard	Standard	Externally fitted hardware that supports the panel in its functions of opening and closing must be metal.	Externally fitted hardware that supports the panel in its functions of opening and closing must be metal.
Seals	Weather-strips, draught excluders or draught seals must be fitted to hinged doors	Weather-strips, draught excluders or draught seals must be fitted to hinged doors	Weather-strips, draught excluders or draught seals must be fitted to hinged doors	Weather-strips, draught excluders or draught seals must be fitted to hinged doors. Seals for both hinged and sliding doors must be made from silicone or have a flammability index less than 5	
Screening (Including Security)	Openable portions of hinged doors and sliding doors are not required to be screened. However, if screens are fitted externally, the screens shall be mesh or perforated with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.	Openable portions of hinged doors and sliding doors are not required to be screened. However, if screens are fitted externally, the screens shall be mesh or perforated with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.	Openable portions of hinged doors and sliding doors are not required to be screened. However, if screens are fitted externally, the screens shall be mesh or perforated with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.	Openable portions must be protected by external screens. The screens shall be mesh or perforated with a maximum aperture of 2mm, made from corrosion resistant steel, or bronze.	

**NOTE:**

- Where double-glazing is used, the glazing requirement provided in the standard apply to the external face of the window assembly only
- Low-level glazing of any glass within 400mm of the ground, decks, carport roofs, awnings or similar horizontal (or near horizontal) elements
- This is a guide and not a replacement for AS3959:2018. For more information, refer to AS3959:2018 Construction of Buildings in Bushfire Prone Areas.