

## XL Wall System-Fire Resistance (FRP)



Ron Marshall  
95/433 Brisbane Road  
Coomabah, QLD 4216  
1<sup>st</sup> November 2012

Building Solutions Pty Ltd  
PO Box 730  
COOROY QLD 4563

Attn. Peter Kelly Re: Fire Compliance of Ritek XL Wall Systems.

The BCA requires that a building element meets its requirements for Fire-Resistance. For compliance, a reinforced concrete wall can either satisfy the limitations contained in the BCA 2012, or be designed in accordance with Australian Standard AS3600-2009 Concrete Structures, or by test.

Tables 6.2 and 6.3 in the XL Wall Systems Manual Version 2010.01 summarize the limitations from the BCA2012 and Tables 6.3 to 6.6 summarizes the values calculated from AS3600-2009. A design example illustrating the calculation method is set out in Section 9.3 of the Ritek manual.

Ritek walls that satisfy the minimum thickness requirements are summarized in the following Table. In all practical cases the walls based on minimum wall thickness will be satisfactory, but both the BCA2012 and AS3600-2009 also impose upper limits on design loads and wall heights. These additional limitations need to be checked and reference to Tables 6.3 to 6.5 in the Ritek manual should be made.

FRP (minutes)	Ritek Wall Type		
	BCA 2012 (deemed to comply)	Designed in accordance with AS3600-2009	
		Wall exposed to fire on one side only	Wall exposed to fire on both sides
60	-	135XL	135XL
90	165XL	135XL	165XL
120	165XL	165XL	200XL
180	165XL	200XL	265XL
240	200XL	265XL	-

Within the load and height limits contained in Tables 6.3 to 6.5 of the Ritek manual, the walls contained in the above Table are deemed to comply under the BCA 2012.

Ritek 150XL Wall compliance by test:

The Ritek 150XL wall has been submitted for a standard test AS1530.4 (3m high wall with fire on one side) at CSIRO and achieved a fire resistance level (FRL) of 240/240/240.

Yours Sincerely,



Ron Marshall B.E., M.Eng, Sc.  
RPEQ 5899

Ron Marshall Consultant ABN: 41 899 743 080

95/433 Brisbane Road,  
Coomabah, QLD, 4216

Ph: (07) 5594 0358  
Fax: (07) 5594 0358

Mobile: 0412 441 609  
e-mail: ronmarshall@masonry.net.au