

Could this be a solution to the cladding fiasco?

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This article has been supplied by Lucas Coombes, Roscon.

Mr Bruce Rayment the Chief Executive Officer of the company with exclusive Australian rights for the distribution of 'Alucobond' aluminium composite material, providing evidence to the Senate Committee indicates "there is no such thing as a panel that passes AS1530.1". Subsequently, as experts we need to look for solution to tackle this epidemic, as industry estimates indicate Australians purchase 2.5 million square metres of aluminium composite material per annum.

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Recently Roscon was invited to provide evidence to the abovementioned Senate Committee and our General Manager, Mr Sahil Bhasin was shocked whilst waiting in the gallery for his moment in the spotlight, when he heard industry experts who all agreed there is no aluminium composite product available in Australia that meets the Australian Standard (AS1530.1).

Extracts from the Senate Enquiry:

Senator XENOPHON: Sorry, I'm being a bit slow here. What are you saying? So, there's a standard that we can't comply with?

Mr Martin: Correct.

Mr Rayment: Correct.

Senator XENOPHON: Why can't it be complied with?

Mr Martin: For one, it's because the actual test itself is not intended for these types of products.

Senator XENOPHON: So we have a standard that can't be complied with?

Mr Martin: Yes.

Senator XENOPHON: It's not much of a standard then, is it?

Mr Martin: No.

Source - Page 67, Senate Enquiry Hansard Record

The solution to our epidemic could be 'intumescent paint coatings' which enhance the fire safety properties of materials making them more fire retardant. When exposed to a fire situation these coatings expand into an insulating char up to 50mm thick, protecting the underlying substrate beneath e.g. (Aluminium Composite Material). Some intumescent coating systems are suitable for external use and not visible to the naked eye, as they can be applied in a transparent application. A demonstration of the coating protecting cardboard from open flame can be viewed here: Intumescent Paint.

The Bradford City Stadium fire was the worst fire disaster in the history of British football. It occurred during a league match in front of record numbers of spectators on Saturday, 11 May 1985, killing 56 and injuring at least 265. ARUP, a world leading engineering consultancy, was employed as the Fire Engineers for the new Bradford City Stadium, and used intumescent paint coatings as the fire engineering solution, see this video: Intumescent Paint Research.

Notwithstanding the desirable properties offered by the coating, sufficient case studies are not available for external wall applications in Australia. They are commonly used internally to achieve required Fire Resistance Level (FRL).

Additionally, the current Deemed to Satisfy (DTS) performance requirements in the Building Code of

28/11/2017

Could this be a solution to the cladding fiasco? Intumescent paint



Australia (BCA) stipulate that all elements of an external wall must be non-combustible. In this solution the combustible cladding would still be present, and so the wall would still be non-compliant under DTS.

Intumescent paint coatings may be allowed under alternative solutions signed off by Building Surveyors, or it is anticipated that future editions of the BCA will include a full-scale wall test as the means for assessing combustibility, which may allow this solution to be deemed compliant under DTS,

however this is presently unconfirmed.

Given that we don't have any Aluminium Composite Material in Australia which meet the Australian Standard (AS1530.1) testing regime, of cladding not being combustible for 30min inside a 750 degrees furnace, we need to look for alternative solutions. The following **CSIRO test confirming** that even non-combustible Aluminium Composite Material sold into the Australia market is combustible.

Given the lack of testing data to the relevant Australian Standards for external walls or certainty surrounding performance requirements for combustibility of external walls in future editions of the Building Code of Australia, this solution is currently unsuitable as a non-destructive alternative to removing non-compliant cladding, however may be compliant in years to come based on the changes expected in the BCA.

However, it seems doubtful that thousands of buildings will have their cladding removed or their sprinkler systems extended as these require significant fiscal outlay and resident disturbance, so a non-destructive solution like this which can be applied just like regular paint will be the most likely candidate to eventually fix the issue. A consistent painting maintenance schedule and testing of these products to relevant Australian Standards would be required.



Roscon has provided expert advice and recommendations to the Senate Committee for Aluminum Composite Panelling. Recently Roscon was invited by the CEO of the Victorian Cladding Taskforce to also provide expert advice and recommendations, making Roscon the industry leading expert in Aluminum Composite Paneling.

The author of this article, Mr Lucas Coombes, has completed a Bachelor of Engineering Civil and Infrastructure (Honours) and then Master of Engineering (Civil with Business) at the University of Melbourne.

- Senate Enquiry, Audio 5:15 5:41
- Senate Enquiry, Hansard Records
- Senate Enquiry, Interim Report
- Roscon Cladding Audit Flyer
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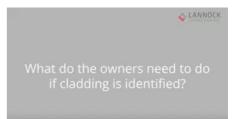
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