

Sealtight is non-compliant with the NCC as they are the referenced standards. This opinion is in error as AS3700 Clause 1.3 Use of Alternative Materials or Methods, states:

Provided the requirements of Section 2 are met, this Standard shall not be interpreted in a way that prevents the use of alternative materials or methods of design or construction not specifically referred to herein.

### Testing of Sealtight and Sodium Silicate Solution Treatments on Mortar

33. A trial of both Sealtight and Sodium Silicate was arranged for 23<sup>rd</sup> August for the first application, 30<sup>th</sup> for the second application and 6<sup>th</sup> September for scratch index tests on the trial areas.
34. On or before the 23<sup>rd</sup> August a proposed test area was selected by the owner. Before applying either treatment the mortar was tested with the scratch tester. While a full test was not conducted 3 readings were taken and all were better than the M3 minimum of 0.3 mm penetration. As the intent of the trial was to show if the treatment increased the durability of non-compliant mortar to a level that complies with the AS3700-2011 requirements a different area was required for the trial.
35. A scan around the house, using point tests, identified 2 areas of non-compliant mortar for the trial. The mortar joints chosen were adjacent to the articulation joint and 2 bricks south for the lower joint, on the rear panel of brickwork on the south-eastern elevation. The mortar joint selected for the sodium silicate trial was the 3<sup>rd</sup> mortar bed above the DPC. The mortar joint selected for the Sealtight trial was the 1<sup>st</sup> mortar bed below the DPC.



Figure 2. Joint chosen for sodium silicate trial (marked either end in blue)



Figure 3. Joint chosen for Sealtight trial (marked either end in blue)

36. The selected joints were tested for Scratch Index and then Sealtight and sodium silicate were brushed on the respective joints using an 18 mm detail brush until the joints had a wet appearance. Sealtight is reported to work with one application; however, on the 30<sup>th</sup> August, Mr Vincent applied a second application to one end of the original trial area in case it was necessary to have 2 applications.
37. On 6<sup>th</sup> September the treated areas or the joints were tested for Scratch Index.
38. The results of all Scratch Index tests are shown below:

Sodium silicate trial area before application

Sample Location	Individual Scratch Tool Measurement (inches)	Individual Scratch Tool Measurement Converted to mm	Individual Scratch Tool Measurement Rounded mm	Scratch Index Result (mm)	Pass/Fail
South-East ely.	0.031	0.7874	0.775	0.41	Fail M3
rear panel	0.020	0.508	0.5		
adj. A. Joint	0.022	0.5588	0.55		
3 courses above	0.001	0.0254	0.025		
DPC	0.008	0.2032	0.2		

Sodium silicate trial area one week after 2<sup>nd</sup> application

Sample Location	Individual Scratch Tool Measurement (inches)	Individual Scratch Tool Measurement Converted to mm	Individual Scratch Tool Measurement Rounded mm	Scratch Index Result (mm)	Pass/Fail
South-East elev.	0.002	0.0508	0.05	0.045	Pass M3 & M4
rear panel	0.006	0.1524	0.15		
adj. A. Joint	0.001	0.0254	0.025		
3 courses above	0.000	0	0		
DPC	0.000	0	0		

## Sealtight trial area before application

Sample Location	Individual Scratch Tool Measurement (inches)	Individual Scratch Tool Measurement Converted to mm	Individual Scratch Tool Measurement Rounded mm	Scratch Index Result (mm)	Pass/Fail
South-East elev.	0.019	0.4826	0.475	0.495	Fail M3
rear panel	0.010	0.254	0.25		
adj. A. Joint	0.013	0.3302	0.325		
1 course below	0.028	0.7112	0.7		
DPC	0.029	0.7366	0.725		

## Sealtight trial area after 1 application

Sample Location	Individual Scratch Tool Measurement (inches)	Individual Scratch Tool Measurement Converted to mm	Individual Scratch Tool Measurement Rounded mm	Scratch Index Result (mm)	Pass/Fail
South-East elev.	0.004	0.1016	0.1	0.05	Pass M3 & M4
rear panel	0.001	0.0254	0.025		
adj. A. Joint	0.001	0.0254	0.025		
1 course below	0.001	0.0254	0.025		
DPC	0.003	0.0762	0.075		

## Sealtight trial area after 2 applications

Sample Location	Individual Scratch Tool Measurement (inches)	Individual Scratch Tool Measurement Converted to mm	Individual Scratch Tool Measurement Rounded mm	Scratch Index Result (mm)	Pass/Fail
South-East elev.	0.004	0.1016	0.1	0.06	Pass M3 & M4
rear panel	0.001	0.0254	0.025		
left of 1st trial	0.001	0.0254	0.025		
1 course below	0.003	0.0762	0.075		
DPC	0.003	0.0762	0.075		