

Tensile Bond Strength of Grout on Stone

In House Test based on BS EN 14488-4

280317 – Forest Pennant Sandstone and Steintec Grout

Client Details	Quality Surface Solutions Limited		
	Construction House, 54 Putnoe Lane, Bedford, MK41 9AF		
Contact Name	Mr Chris Browne		
Order Reference	WW0 21	Order Date	27/04/09

Sample Details			
Sample Type	Sealed and unsealed Forest Pennant sandstone	No Samples Received	2
Sampled By	Client	Sampling Date	Not advised
STATS Batch No	9268	No Samples Tested	2 (+ 2 control samples)
Receipt Date	27/04/09	Test Date	30/04/09 to 7/05/09

Methods	
Preparation	Samples cleaned, wetted, then coated with approximately 10mm thick layer of Steintec grout, cured for 24 hours at 100% RH then dried for 6 days
Test	Tensile pull off testing as per method in BS EN 14488-4
Specification	None published
Acceptance Criteria	Comparison between sealed and unsealed examples of same sandstone, with additional hard sandstone and granite for comparison

Results

Sample Reference	Description	Test diameter (mm)	Failure load (N)	Pull-off strength (N/mm ²)	Mean strength (N/mm ²)	Failure mode
ST1A	Forest Pennant - unsealed	50.7	1662	0.823	1.092	Grout-stone interface
ST2A		50.7	2748	1.361		Part grout, part adhesive
ST1B	Forest Pennant - sealed	50.7	2618	1.297	1.311	Internal stone
ST2B		50.7	2677	1.326		Grout-stone interface
ST3A	Hard sandstone - unsealed	50.7	2645	1.310	1.11	Grout-stone interface
ST3B		50.7	1843	0.913		Grout-stone interface
ST4A	Granite - unsealed	Grout detached prior to testing, indicating no appreciable bond strength				
ST4B						

Assessment against criteria No significant change sealed to unsealed stone

Certification

Certificate prepared by	Certificate reviewed by
	
Dieu Hoang Scientist	Dr Ian G Blanchard Senior Consultant
Tested by	Certificate issue date
DIH	13-May-2009

The results given in this certificate relate only to those samples submitted and specimens tested and to any materials properly represented by those samples and specimens.

End of Certificate