



ENGLISH CERAMIC WALL TILES

**TECHNICAL SPECIFICATIONS
CERAMIC WALL TILES**

manufactured by:

H & E Smith Limited
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Date of Test: October 2003

Tested by: **CERAM** Research Limited

CERAM Samples Ref: 603020179

Sample description: Van Delft Glazed Ceramic Tiles BIII 9" x 3" x 3/8" nominal (228.6 x 76.2 x 10 mm)

Colour: **Mayfair White**

BS Test Specification	Test Description	BS Test Requirements	Test Results)	Pass
BS 6431: Part 10:1984 (EN98:1991)	Determination of dimensions and deviations			
Maximum deviation from work size	Length	+/-0.75%	+0.51%	Yes
	Width	+/-0.50%	+0.29%	Yes
Maximum deviation from average size	Length/width Average size of 10 tiles 228.6x76.2 mm	+/-0.5%	+0.1%	Yes
	Thickness	+/-0.5 mm	+ 0.4 mm	Yes
	Straightness of sides	+/-0.3%	+0.17%	Yes
	Rectangularity	+/-0.5%	-0.32%	Yes
	Centre Curvature	+0.5~-0.3%	-0.15%	Yes
	Edge Curvature	+0.5~-0.3%	+0.14%	Yes
	Warpage	+/-0.5%	+0.15%	Yes
BS 6431: Part 10:1984 (EN98:1991)	Determination of surface quality			
	When examined under the standard conditions of the test, more than 95% of the tiles tested were acceptable.			Yes

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BS Test Specification	Test Description	BS Test Requirements	Test Results)	Pass
BS 6431: Part 11:1983 (EN99:1991) (EN-159 category BIII)	Water absorption	>10%	20.7% average	Yes
BS 6431: Part 12:1983 (EN100:1991)	Modulus of rupture	>12N/mm ²	22.8N/mm ²	Yes
BS 6431: Part 13:1986 (EN101:1991)	Scratch Hardness 'Mohs'	>3	4	Yes
BS 6431: Part 15:1983 (EN103:1991)	Linear Thermal Expansion	$9 \times 10^{-6} \text{C}^{-1}$	$6.5 \times 10^{-6} \text{C}^{-1}$ $6.0 \times 10^{-6} \text{C}^{-1}$	Yes
BS 6431: Part 16.5:1983 (EN104:1991)	Thermal shock total immersion		No damage	Yes
BS 6431: Part 17:1983 (EN105:1991)	Crazing Resistance		No crazing	Yes
BS 6431: Part 19:1984 (EN122:1981)	Chemical resistance glazed tiles acids & alkalis			
	Methylene blue solution 10g/l, 24 hours.	2	1	Yes
	Potassium permanganate solution 10g/l, 24 hours.	2	2~3	No
	Ammonium chloride solution 100g/l, 6 hours.	B	AA	Yes
	Standard cleaning agent solution 10g/l, 6 hours.	B	AA	Yes
	Sodium hypochlorite solution 20mg/l, 6 hours.	B	AA	Yes
	Copper sulphate solution 20mg/l, 6 hours.	B	AA	Yes
	Citric acid solution 3% v/v, 7 days	B	AA	Yes
	Potassium hydroxide solution 30g/l, 7 days.	B	AA	Yes
BS 6431: Part 21:1984 (EN155:1991)	Moisture Expansion	0.6mm/m	0.33~0.39 Mm/m	Yes