



TBV stanger

Report

Testing of Samples of Natural Slate -
'Del Carmen'

Spanish Slate Quarries Limited

5 October 1995

ASTM



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Report

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1 Introduction

We were instructed in a fax dated 8th June 1995 to carry out testing on samples of natural slate in accordance with the methods specified in ASTM C406-89, 'Standard Specification for Roofing Slate'.

We were advised by the client that the samples were of 'Del Carmen' slate.

The samples were delivered to TBV Stanger on 15th May 1995.

2 Procedures

2.1 Modulus of Rupture

Testing was carried out in accordance with ASTM C120-85.

2.2 Water Absorption

Testing was carried out in accordance with ASTM C121-85. The samples tested measured approximately 100 mm x 100 mm x 5 mm.

2.3 Weather Resistance (Depth of Softening)

Testing was carried out in accordance with ASTM C217-85 using the procedure with the shear/scratch tester. The samples measured approximately 51 mm x 102 mm and 4 to 5 mm in thickness. The samples were prepared by sawing and the faces were ground smooth and finished with No. 80 abrasive.



3 Results

Date of Tests : 27th July to 31st August 1995.

3.1 Modulus of Rupture

TBVS Reference	Modulus of Rupture across grain MPa
GM 2642/1	60.4
GM 2642/2	54.5
GM 2642/3	67.5
GM 2642/6	70.1
GM 2642/7	73.3
GM 2642/9	65.8
Mean	65.3

3.2 Water Absorption

TBVS Reference	Water Absorption %
GM 2642/1	0.27
GM 2642/2	0.19
GM 2642/3	0.26
GM 2642/6	0.25
GM 2642/7	0.25
GM 2642/9	0.26
Mean	0.25

3.3 Weather Resistance (Depth of Softening)

TBVS Reference	Depth of Softening mm
GM 2642/1	0.06
GM 2642/2	0.04
GM 2642/7	0.02
Mean	0.04

4 Comments

The mean values obtained for the test samples met the requirements for Grade S1 Roofing slate specified in ASTM C405-89 with respect to Modulus of Rupture across the grain, water absorption and depth of softening.

The requirements specified in ASTM C406-89 for Grade S1 slate are as follows:-

Modulus of rupture across grain (minimum)	62 MPa
Water Absorption (maximum)	0.25 %
Depth of Softening	0.05 mm

5 Quality Statement

- i) We confirm that in preparing this report we have exercised all reasonable skill and care.
- ii) The test results presented in this report refer only to the specimens supplied and tested.