

AMBER CONSULTING COMPANY
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Cupa Pizarras, S.A.

Attn: Belen Diaz Lopez
CIF:A-32225427
A Medua s/n
32330 Sobradelo de Valdeorras (Ourense)
Spain

June 30, 2022

Dear Belen:

Cupa 50 Roofing Slate from the San Vicente quarry in San Vicente-Villamartin de Valdeorras-Ourense-Spain was tested per ASTM specifications. A final summary of the results is as follows:

- 1. Water Absorption, C121-20, 0.073% (ASTM max. for S1 slate is 0.25%).**
- 2. Flexure, C120-19, Breaking Load 606 lbs, Ave. thickness 0.237 in. (ASTM min. for S1 slate is 575 lbs)**
- 3. Weather Resistance, C217-20, 0.0007 in. (ASTM max. for S1 slate is 0.002 in.)**

Tables 1, 2 and 3 on page 2 list the individual test results. From the specimens tested, this variety of roofing slate qualifies as a S1 grade slate (75+ projected life) per the requirements of ASTM C406-15 (Specification for Roofing Slate).

Modulus of Rupture tests were conducted on a Tinius Olsen Testing Machine calibrated June 2021. The Weather Resistance tests were conducted using the hand scraping method. Thickness measurements were taken at three (3) different locations along the scrape track. The average depth of softening was recorded.

If there are any questions or concerns, please do not contacting us

Very truly yours,

Thomas H. Olson
Test Engineer

ASTM Test Results

Cupa 50 Roofing Slate
For: Cupa Pizarras, S.A.
By: Amber Consulting Co.
06/30/22

Quarry: San Vicente
San Vicente-Villamartin de Valdeorras-Ourense-Spain

TABLE 1- Water Absorption-C121

Specimen No.	Absorption (%)
50VC1A	0.081
50VC2A	0.072
50VC3A	0.069
50VC4A	0.062
50VC5A	0.076
50VC6A	0.080
Average	0.073% (S1 max 0.250%)

TABLE 2- Flexural Strength- C120

Specimen No.	Breaking Load (lbs.)	Thickness (in.)
50VC1R	625	0.254
50VC2R	567	0.290
50VC3R	604	0.275
50VC4R	552	0.293
50VC5R	632	0.299
50VC6R	583	0.267
50VC7R	695	0.288
50VC8R	567	0.312
50VC9R	660	0.331
50VC10R	576	0.315
Average	606 lb.	0.237 in.(S1 min. 575 lbs)

TABLE 3- Weather Resistance-C217

Specimen No.	Depth of Softening (in.)
50VC1W	0.0006
50VC2W	0.0007
50VC3W	0.0007
Average	0.0007 in (S1 max 0.002 in.)