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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

July 17, 2023

Dear Belen:

Cupa 7 Roofing Slate from the San Pedro de Trones quarry in Leon Spain was tested per ASTM specifications. A final summary of the results is as follows:

- 1. Water Absorption, C121-20, 0.181% (ASTM max. for S1 slate is 0.25%).**
- 2. Flexure, C120-19, Breaking Load 742 lbs, Ave. thickness 0.304 in. (ASTM min. for S1 slate is 575 lbs)**
- 3. Weather Resistance, C217-20, 0.0006 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 January 2023. 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 7 Roofing Slate
For: Cupa Pizarras, S.A.
By: Amber Consulting Co.
07/17/23

Quarry: San Pedro de Trones
León-Spain

TABLE 1- Water Absorption-C121

Specimen No.	Absorption (%)
7VC1A	0.184
7VC2A	0.210
7VC3A	0.162
7VC4A	0.141
7VC5A	0.227
7VC6A	0.160
Average	0.181% (S1 max 0.250%)

TABLE 2- Flexural Strength- C120

Specimen No.	Breaking Load (lbs.)	Thickness (in.)
7VC1R	694	0.301
7VC2R	849	0.350
7VC3R	887	0.332
7VC4R	701	0.291
7VC5R	697	0.300
7VC6R	584	0.260
7VC7R	754	0.296
7VC8R	815	0.300
7VC9R	660	0.288
7VC10R	927	0.320
Average	742 lb.	0.304 in.(S1 min. 575 lbs)

TABLE 3- Weather Resistance-C217

Specimen No.	Depth of Softening (in.)
7VC1W	0.0005
7VC2W	0.0007
7VC3W	0.0006
Average	0.0006 in (S1 max 0.002 in.)