

Rojo Alicante



Image source: www.levantina.com

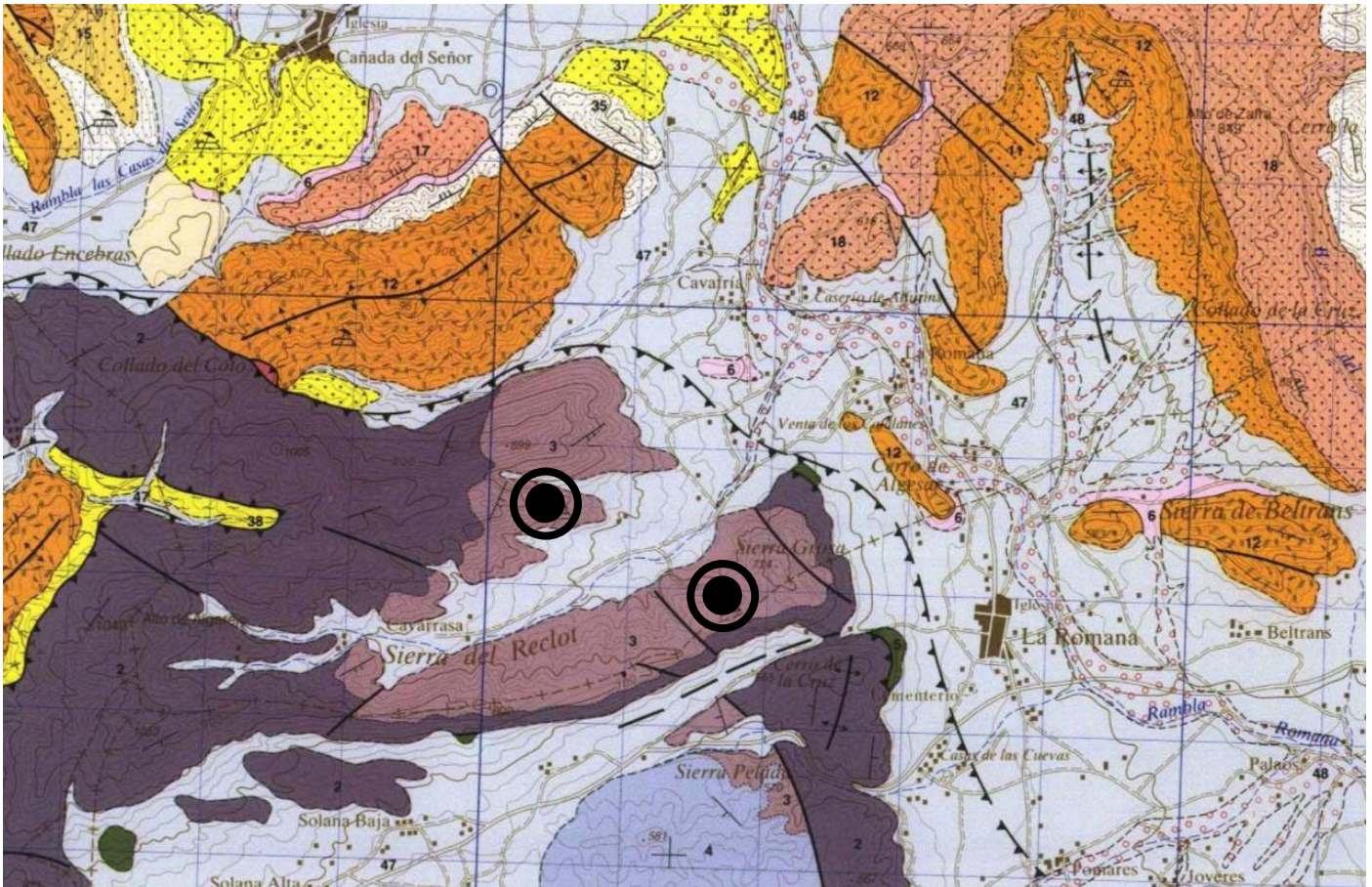
3 cm

Short description:

Red massive limestone with frequent discontinuities (white veins and stylolites).

Commodity (vocabulary)	Lithology (vocabulary)	Typical colour (code list)	Place of origin			
			Country	County / District / Province	Municipality / Community	Place/town / Village
Limestone	Limestone	Red	Spain	Alicante	Monóvar	Monóvar

Geological setting



Geology:

From a geological point of view, Rojo Alicante quarries are located in the External Subbetic domain in the central section of the Baetic Cordillera Mountain Range. Its Triassic, Jurassic and Cretaceous materials were deposited on the Tethys seabed. During Middle Jurassic, sedimentation in this area was very scarce, giving rise to marly-limestones and nodular red limestones (Ammonitic Rosso facies) due to the existence of warm and oxygenated waters that favored the presence of an abundant benthic fauna that constantly stirred the sediments favoring the formation of nodular structures and the formation of hematites, which gave the rocks their characteristic red color. All of these rocks are very rich in ammonite and belemnite fossils. These rocks are on many occasions in condensed series (thin strata that represent long intervals of time, 1 or 2 mm every 1000 years), on which hardgrounds and crusts of iron and manganese oxides developed.

Geological age: Jurassic (Dogger)

Geological unit: External Subbetic domain

Application, use and heritage



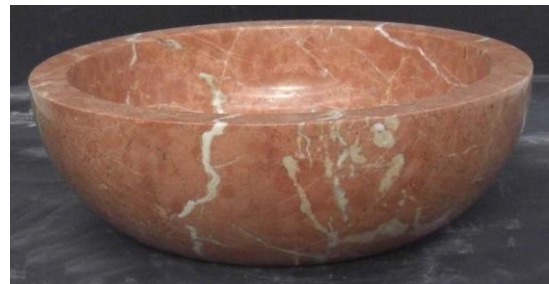
www.levantina.com



www.levantina.com



www.comunitatvalenciana.com



www.storemarble.com

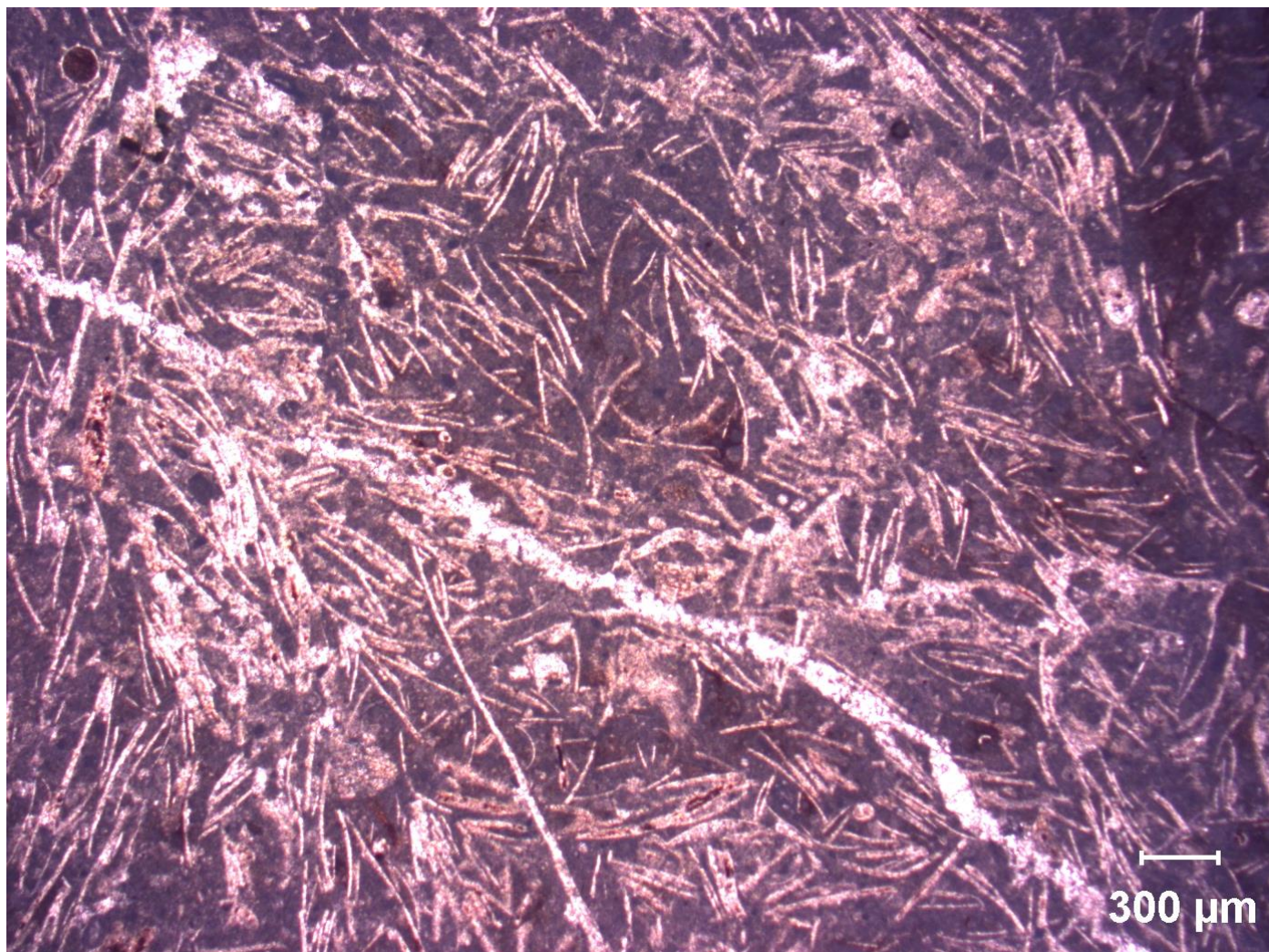
Description:

The historical varieties of the Rojo Alicante ornamental stone enjoyed important national fame for several centuries. First written references about historical quarries date from 1764, but the extractive activity probably dates back several decades or centuries. 18th century makes up an active period in all these quarries and historical references assert that columns and blocks from these quarry region were used in the Murcia cathedral and even in the Spanish Royal Palace in Madrid (1735-1764). The industrialisation of the different quarries took place during the second half of the 20th century. Most of the historical quarries of this extractive region were abandoned during the pre-industrial times. However, other quarries, like Cavarrasa quarries (from which the Rojo Alicante stone is extracted), continue active and with high and continuous production.

Nowadays, Rojo Alicante stone variety is widely used in modern buildings, especially in outdoor and indoor paving and cladding. Other objects such as sculptures, decorative pieces and accessories are also elaborated.

Information about historical uses: J. Martínez-Martínez, 'Apuntes para la reconstrucción del panorama cantero en el Medio Vinalopó (Alicante) previo a la eclosión y comercialización de la "piedra de Novelda" a nivel nacional', in *Paisajes e historias en torno a la piedra*, Universidad Nacional de Educación a Distancia (España), 2020, pp. 467–488.

Petrography

**Description:**

Fossiliferous limestone (biomicrite) with calcite veins and stylolites. Fossils are mainly fragments of thin pelecypod pellet shells. Othochemical component correspond to micrite partially recrystallized at some points.

Source of information:

Spanish Geological Survey (IGME)

Mineral composition

If no accurate number, use MM=main minerals, SM = Subordinate minerals, AM=accessory minerals

Mineral 1 (%)	Mineral 2 (%)	Mineral 3 (%)	Mineral 4 (%)	Mineral 5 (%)	Mineral 6 (%)	Mineral 7 (%)
Calcite (98%)	Clay minerals (<0.5%)	Mica (<0.5%)	Quartz (<0.5%)	Siderite (AM)	Smectite (AM)	
Mineral 8 (%)	Mineral n (%)					

Source of information:

Spanish Geological Survey (IGME)

Physical properties

Apparent density (EN 1936) kg/m ³	Open porosity (EN 1936) % vol	Water absorption at atmospheric pressure (EN 13755) % wt	Uniaxial Compressive strength (EN 1926) MPa	Flexural strength under concentrated load (EN 12372) MPa
2710	0.6	0.2	98.37	12.8

Real density (EN 1936) kg/m ³	Total porosity (EN 1936) % vol	Water absorption coefficient by capillary (EN 1925) (g/m ² x s ^{0,5})	Flexural strength under constant moment (EN 13161) MPa
		0.6	

Frost resistance (EN 12371)				
Technological Test (Test A)				Identification Test (Test B): Number of cycles completed prior to stone failure
Flexural strength (EN 12372) after freeze-thaw cycling, MPa	Number of cycles	Uniaxial compressive strength (EN 1926) after freeze-thaw cycling, MPa	Number of cycles	
10.24	48	87.3	56	

Abrasion resistance (EN 14157)			Resistance to salt crystallisation (EN 12370)	Breaking load at dowel hole (EN 13364)	
Method A - Wide Wheel Abrasion Test, mm	Method B - Böhme Abrasion Test, cm ³ / 50cm ²	Method C - Amsler Abrasion Test, mm	Change in mass (increase: +; decrease: -), %	Breaking load, N	Thickness of the test specimens, mm
19					

Slip resistance by means of the pendulum tester (EN 14231 / CEN/TS 16165)			Rupture energy (EN 14158), Joule	Thermal Conductivity (EN 1745), W/m·K
Tested surface finish	Slip Resistance Value — SRV			
	Dry test condition	Wet test condition		
Rough	79			

Source of information:

- 1) Spanish Geological Survey (IGME)
- 2) RocMaquina, Piedras Naturales, maquinaria y equipos. ISSN: 0214-0217.
- 3) Technical Report. Levantina Company (www.levantina.com):
<https://www.levantina.com/wp-content/uploads/2016/05/6-ROJO-LEVANTINA-Ficha.pdf>

Sources of more information

Type of information	Name of provider	URL
This data sheet	Levantina Company	www.levantina.com
Non-commercial directory	Spanish Geological Survey	www.igme.es
Commercial directory	RockMaquina – Piedras naturales, maquinaria y equipos.	
Scientific publication		
Other publication	J. Martínez-Martínez, 'Apuntes para la reconstrucción del panorama cantero en el Medio Vinalopó (Alicante) previo a la eclosión y comercialización de la "piedra de Novelda" a nivel nacional', in <i>Paisajes e historias en torno a la piedra</i> , Universidad Nacional de Educación a Distancia (España), 2020, pp. 467–488.	

Compiled by:	Instituto Geológico y Minero de España (IGME) http://www.igme.es/	 Instituto Geológico y Minero de España
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