

Crema Marfil Coto



Image source: www.levantina.com

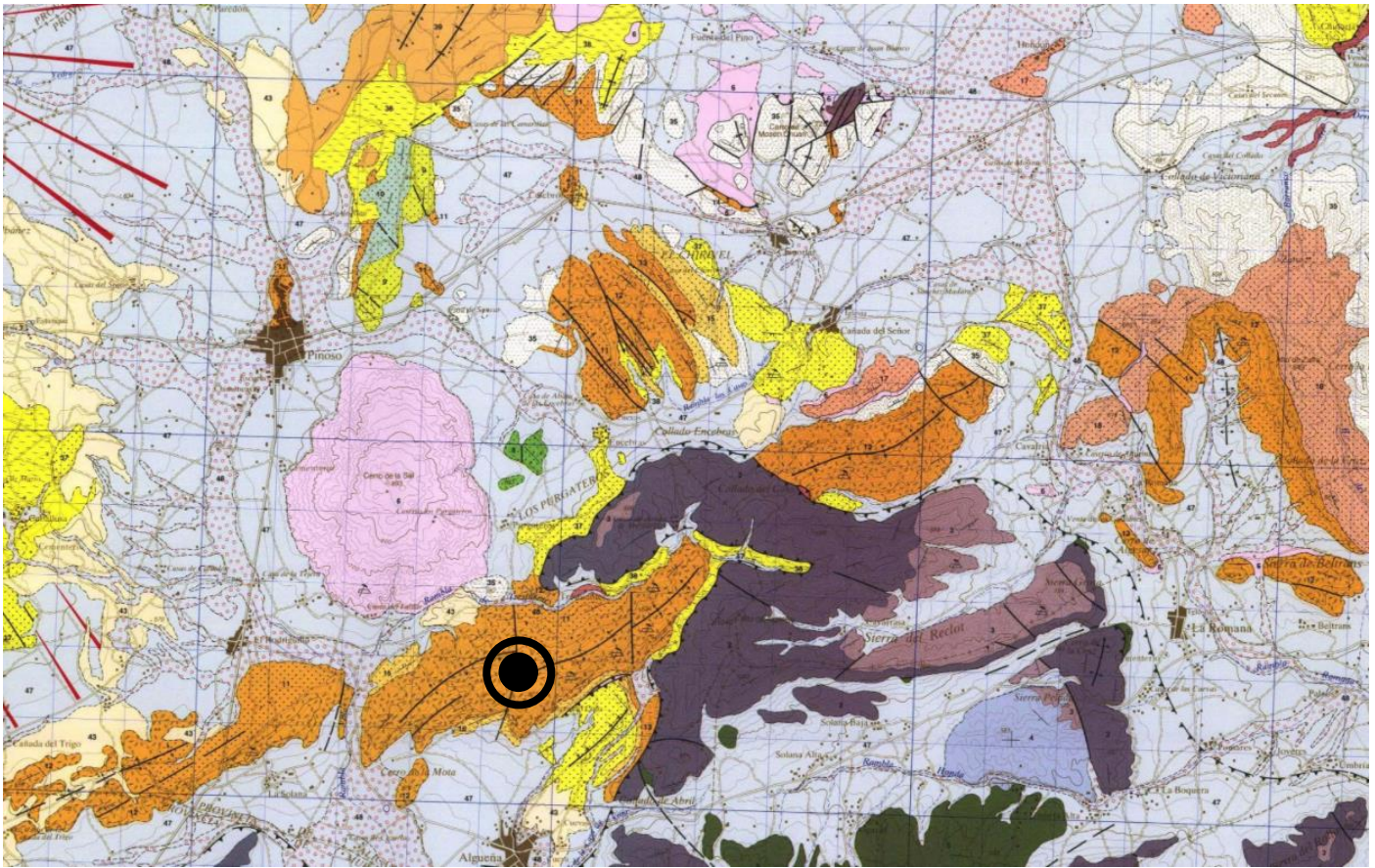
4 cm

Short description:

Cream-coloured massive limestone. Stylolite, calcite veins and joints can be present.

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

Geological setting



Geology:

Crema Marfil Coto quarries are located in the Prebetic Domain (Prebético Interno) belonging to the External Zones of the Betic Cordillera. The Jurassic materials of the Internal Prebetic Domain correspond to gray massive dolostones highly fractured (brecciated facies). Cretaceous stratigraphic serie in this area correspond to an alternance of marls, limestones and marly limestones with high fossiliferous content. Eocene materials are defined by green and red clays, white massive nummulitic limsetones (commercialized as “Crema Marfil Coto”), biomicrites and reef limestones. Finally, the stratigraphic column of the Internal Prebetic Domain in this area finishes with Oligocene materials, corresponding to conglomerates, sandstones, clays, marls and sandy limestones.

Geological age: Eocene

Geological unit: Internal Prebetic Domain

Application, use and heritage



Image source: www.levantina.com



Image source: www.focuspiedra.com

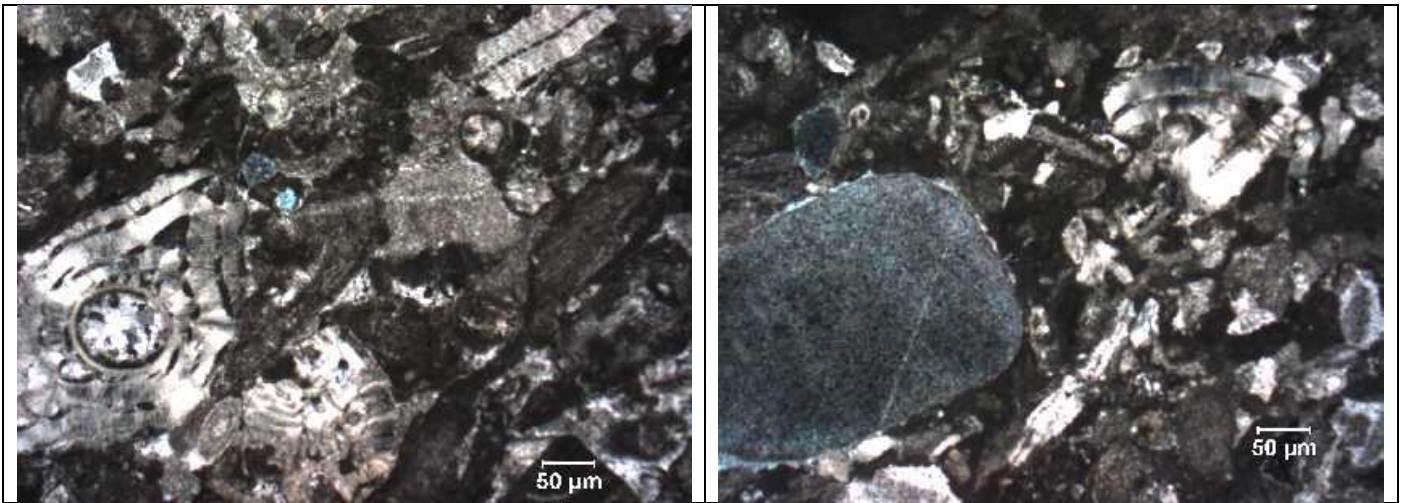


Image source: www.artesanosgarciablesa.es

Description:

The Crema MARfil Coto limestone is one of the commercial varieties of ornamental limestone with the greatest national distribution and widely distributed internationally. Its quarries began to be exploited in the first decades of the 20th century and it is currently a rock widely used in paving and cladding.

Petrography



Description:

Cream-coloured massive limestone. Stylolite, calcite veins and joints can be present. At a microscopic scale, this rock corresponds to a biosparite (grainstones) and biomicrite (wackestone-packestone) with benthic foraminifera (orbitoides and nummulites) and remains of echinoderms, gastropods and algae. The micrite content in this rock can vary between 5% to 12%, but it can reach values up to 30% in some samples. Percentages of the sparitic component vary between 10% and 30%. Bioclasts constitute around the 80% of the rock, being more frequent the macroforaminifera (mainly nummulites, 50% approx.), and less abundant other bioclasts such as microforaminifera, echinoderms, red algae and bryozoa.

Source of information:

- 1) Spanish Geological Survey (IGME)
- 2) García del Cura, M.A., Ordóñez, S., Fort, R., Pina, J.A. (1996): El Crema Marfil (Pinoso, Alicante). Criterios petrográficos de calidad. *Geogaceta*, 20(3): 731-734. *In Spanish*.

Mineral composition

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

Mineral 1 (%)	Mineral 2 (%)	Mineral 3 (%)	Mineral 4 (%)			
Calcite (99%)	Dolomite (<1%)	Opaque minerals (<1%)	Clay minerals (<0.5%)			

Source of information:

- 1) Spanish Geological Survey (IGME)
- 2) RocMaquina, Piedras Naturales, maquinaria y equipos. ISSN: 0214-0217.

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
2690	0.4	0.5	165	9.1

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
		0.73	

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	
7.73	56			

Resistance to ageing by thermal shock (EN 14066)			
Change in dynamic modulus of elasticity (increase: +; decrease: -) %	Change in open porosity (increase: +; decrease: -) %	Change in ultrasound pulse velocity (increase: +; decrease: -) %	Change in flexural strength under conc. load (increase: +; decrease: -) %

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
20.5			-0.05 %	1850	

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		
polished	37	11	3.1	

Source of information:

Technical Report of Crema Marfil ornamental stone (www.levantina.com):
www.levantina.com/wp-content/uploads/2016/10/1-CREMA-MARFIL-COTO-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. Levantina Company	www.levantina.com
Scientific publication	García del Cura, M.A., Ordóñez, S., Fort, R., Pina, J.A. (1996): El Crema Marfil (Pinoso, Alicante). Cristerios petrográficos de calidad. Geogaceta, 20(3): 731-734. <i>In Spanish.</i>	
Other publication		

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