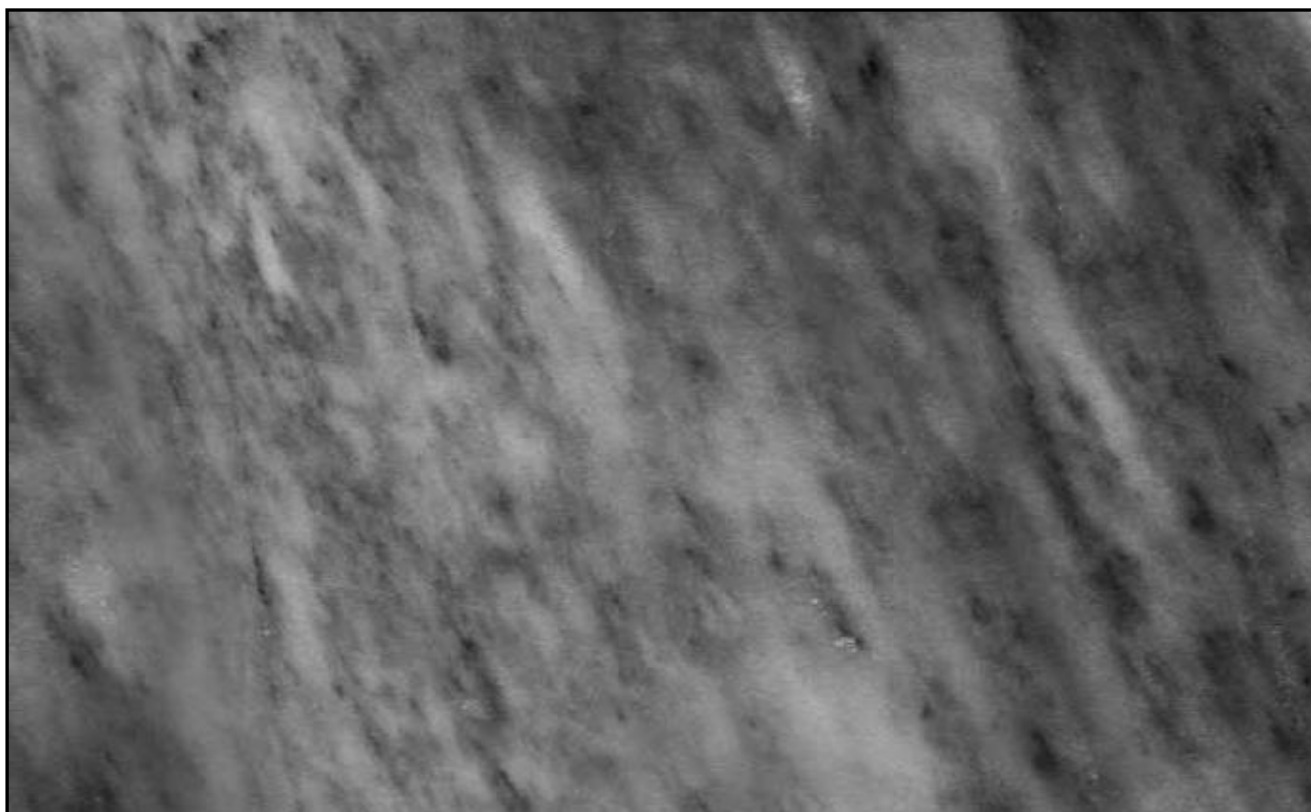


Dionyssos Grey

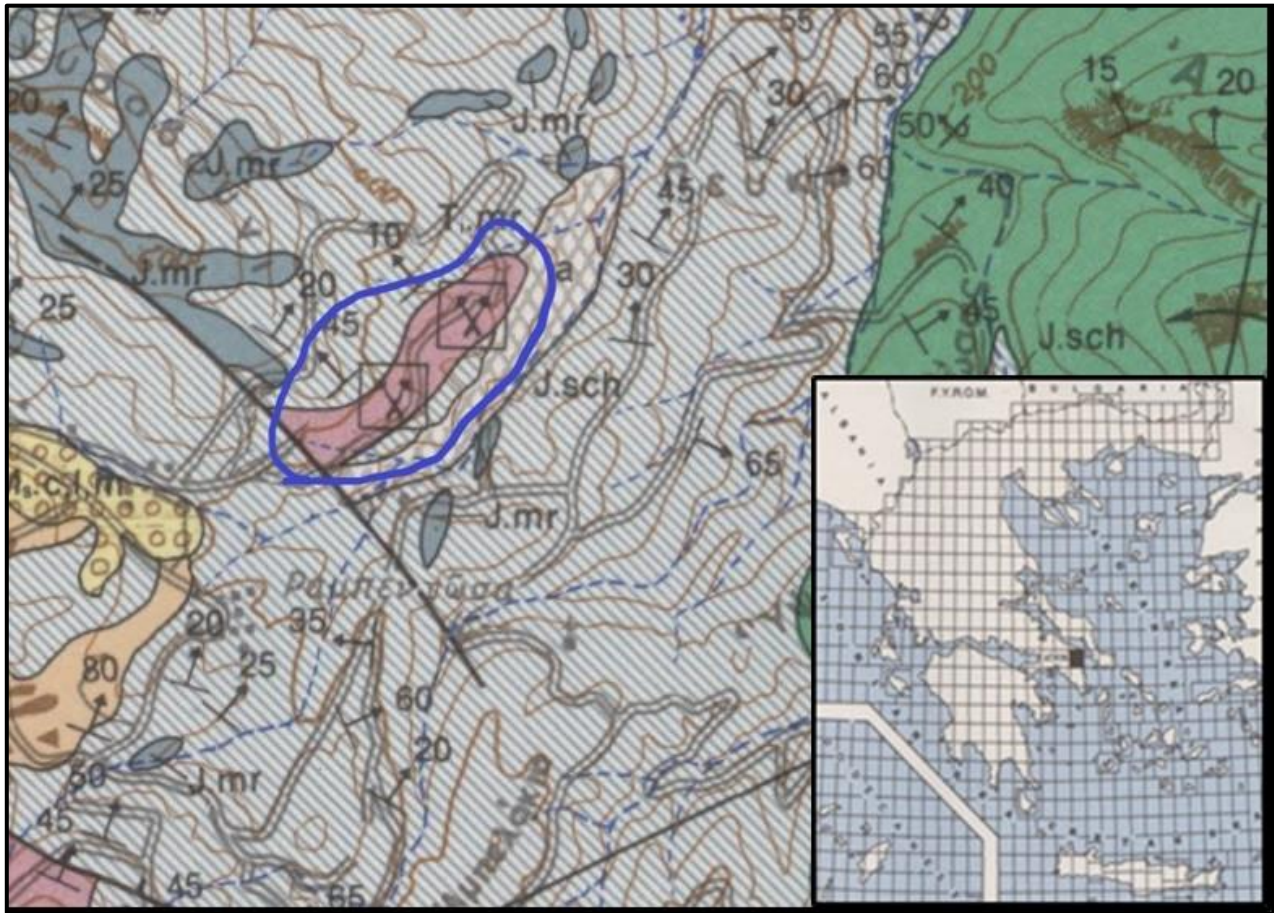


Scale 1:1

Short description: Medium to fine-grained calcitic marble with ash alternations and white or off-white bands.

Commodity (vocabulary)	Lithology (vocabulary)	Typical colour (code list)	Place of origin			
			Country	County / District / Province	Municipality / Community	Place/town / Village
Marble	Calcitic marble	Grey	Greece	Attica	Dionyssos	Dionyssos

Geological setting



Geology: Penteli marbles occur in Almyropotamos – Attiki autochthonous unit of formations that belongs to the huge platform of the Gavrovo – Tripolis zone.

(Source: Geological Map of Greece 1:50000, Kifissia Sheet)

Production: Dionyssos marble has been quarried at the Dionyssovouni site, Dionyssos, Attica, more than 100 years.

Geological age: Neopaleozoic – L.M. Triassic

Geological unit: Penteli marbles

Application, use and heritage

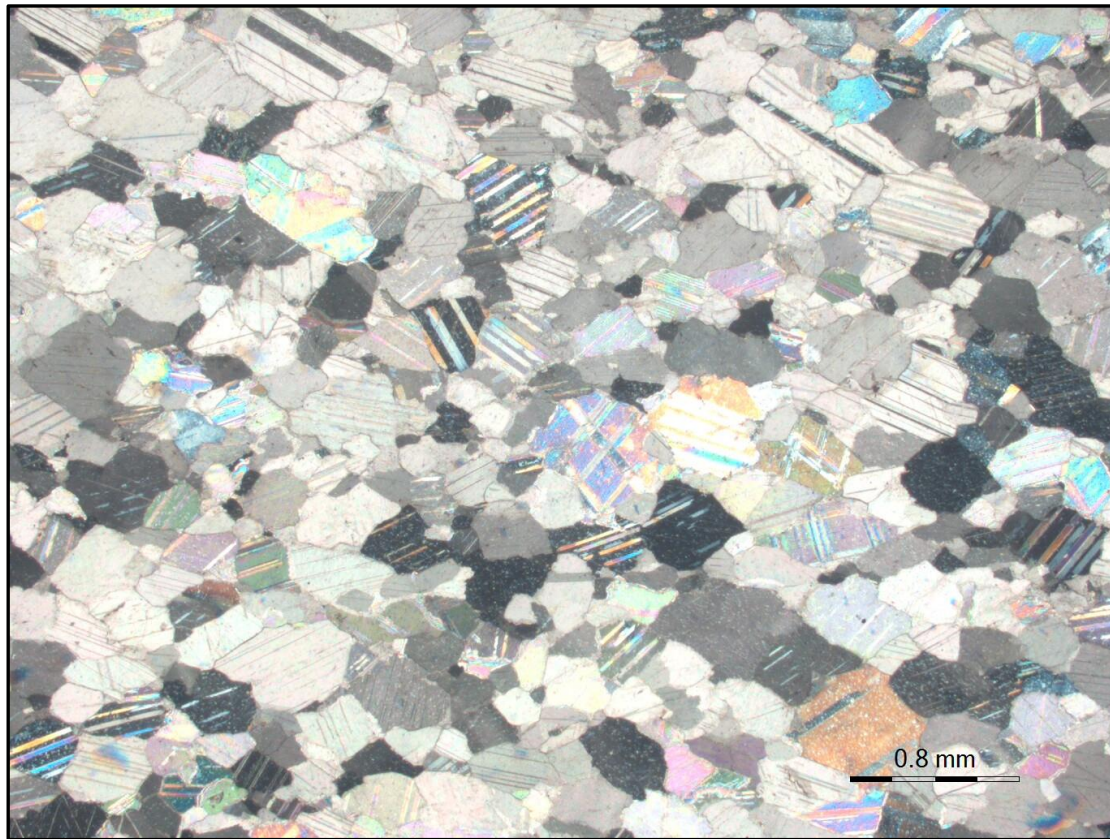
Description: The marble of Dionyssos can be applied to many construction works, cladding, floors, stairs, bathrooms and it is acceptable to all processing that can get a marble.



Archaeological Museum of Olympia: Restoration of the external area. The original building was re-purposed and since 2004 has been a museum about the history of the original Olympic games.

(Source: *Hellenic Republic - Ministry of Culture and Sports*
and *Wikipedia*)

Petrography



Description: Photomicrograph of thin section, showing calcite crystals and dolomite microveins. Tectonic stress occurs in calcite crystals.

Source of information: Hellenic Survey of Geology and Mineral Exploration

Mineral composition

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

Calcite (%)	Quartz (%)	Muscovite (%)	Dolomite (%)	Iron Oxides (%)		
91	4	3	2	AM		

Source of information: Hellenic Survey of Geology and Mineral Exploration

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	0,3	0,1	114	18,2

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
-	-		

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	
18,6	48			

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	-	-	2000	3

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		
			4	-

Source of information: Hellenic Survey of Geology and Mineral Exploration

Chemical properties

Main elements

SiO ₂ (%)	Al ₂ O ₃ (%)	Fe ₂ O ₃ (%)	TiO ₂ (%)	MgO (%)	CaO (%)	Na ₂ O (%)	K ₂ O (%)	MnO (%)	P ₂ O ₅ (%)	SO ₃ (%)	LOI (%)
1,20	0,50	0,05	-	1,20	52,40	0,35	0,17	<0,02	-	-	43,30

Trace elements

V (ppm)	Cr (ppm)	Mn (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	As (ppm)
0,2	21	30	1,3	12	0,8	7,0	0,0
Sr (ppm)	Cd (ppm)	Ba (ppm)	Pb (ppm)	Be (ppm)	Rb (ppm)	Bi (ppm)	U (ppm)
283	0,0	0,0	1,3	0,0	0,0	0,0	0,0
Sc (ppm)	Y (ppm)	Th (ppm)	Sb (ppm)	Ta (ppm)	Nb (ppm)	Zr (ppm)	Sn (ppm)
2,0	2,7	1,8	0,0	0,3	0,2		
Ag (ppm)	B (ppm)	Mo (ppm)	W (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)	Cs (ppm)
Tl (ppm)							

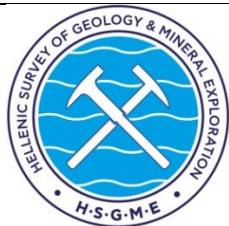
REE

La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)
Dy (ppm)	Ho (ppm)	Er (ppm)	Tm (ppm)	Yb (ppm)	Lu (ppm)		

Methods applied and source of information: Hellenic Survey of Geology and Mineral Exploration

Sources of more information

Type of information	Name of provider	URL
This data sheet	Hellenic Survey of Geology and Mineral Exploration	https://www.eagme.gr/
Non-commercial directory	Hellenic Republic Ministry of Culture and Sports	https://www.culture.gov.gr/el/service/SitePages/view.aspx?iID=1514#prettyPhoto[Gallery]/2/
	Wikipedia	https://de.wikipedia.org/wiki/Arch%C3%A4ologisches_Museum_Olympia
Commercial directory		
Scientific publication		
Other publication		

Compiled by:	Hellenic Survey of Geology and Mineral Exploration (H.S.G.M.E.) https://www.eagme.gr/	
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