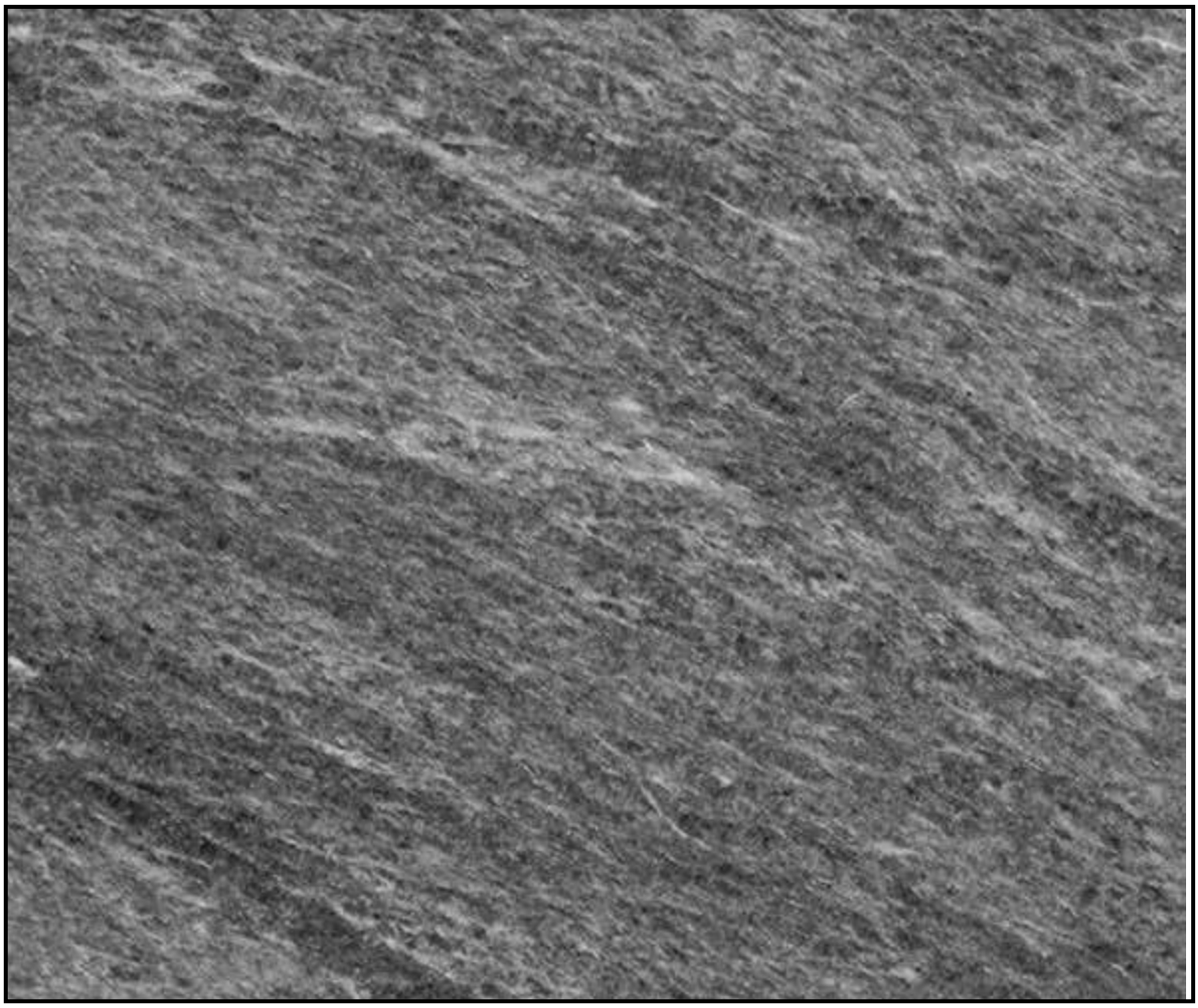
Aliveri Grey

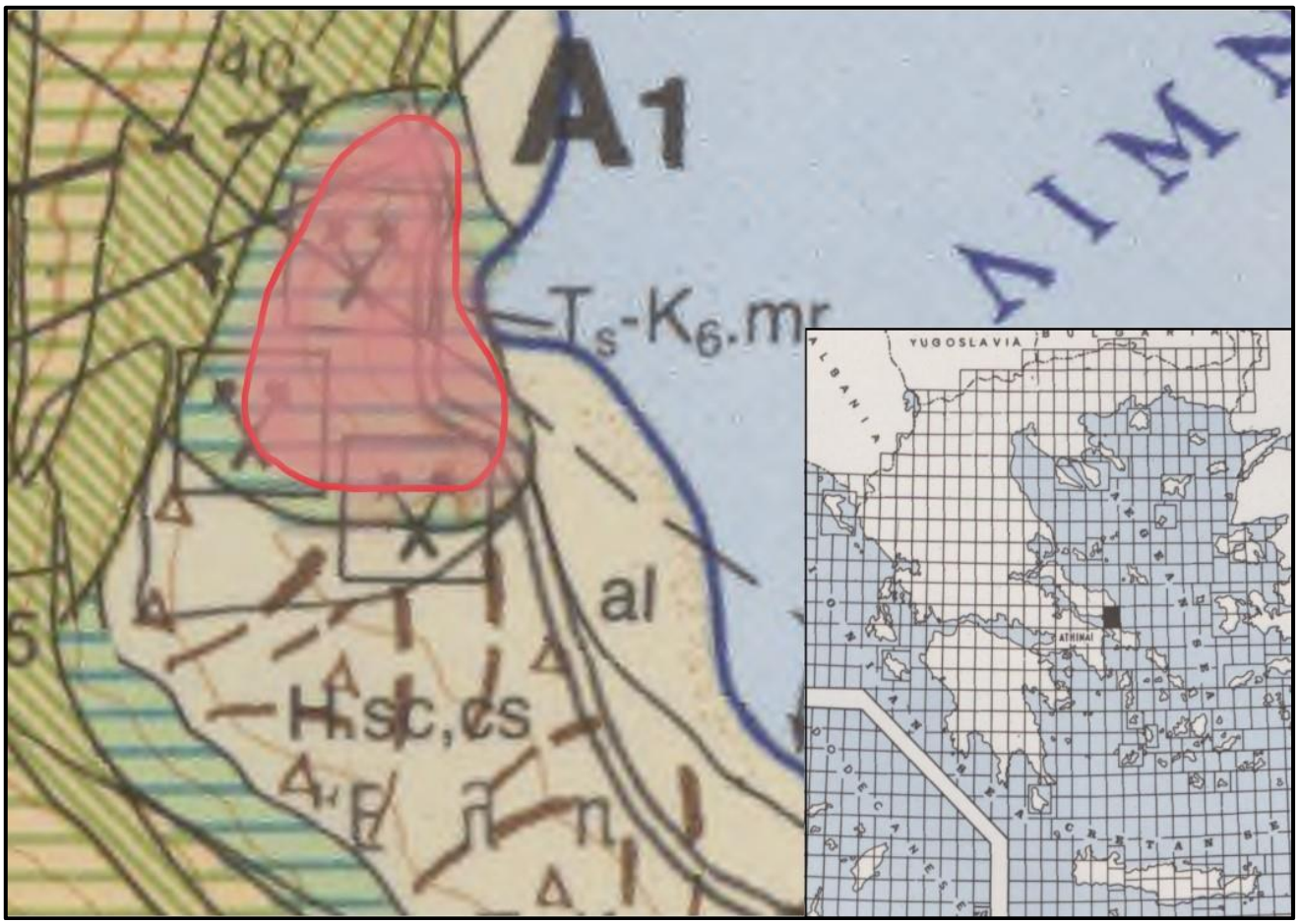


Scale 1:1

Short description: Medium to fine-grained, grey, calcitic marble with a network of off white veins to grey-brown agglomerates.

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	Central Greece/Evia	Kymi-Aliveri	Dystos

Geological setting



Geology: Alivery Grey (red marking) belongs to marbles of autochthonous unit of Almyropotamos – Attiki. They occupy the area between Aghios Georgios-Styra bay and Distos lake underlying the upper Cenomanian – middle Eocene marbles of Almyropotamos series. In this area, these marbles form the core of a great anticline with axis plunging SSW-wards, resulting in the appearance of the deeper stratigraphic horizons of the Almyropotamos series towards S.S.E. (area of Aghios Georgios bay). They are marbles coarse-crystalline, medium to thick-bedded, ight-coloured, grey to whitish, locally with thin intercalations of mainly muscovite and quartz schists.
(Source: Geological Map of Greece 1:50000, Aliveri Sheet).

Production: The most important quarry area is near Lake Dystos, at the southern edge of central Evia.

Geological age: Upper Triassic – Upper Cenomanian

Geological unit: Autochthonous Unit of Almyropotamos – Attiki

Application, use and heritage

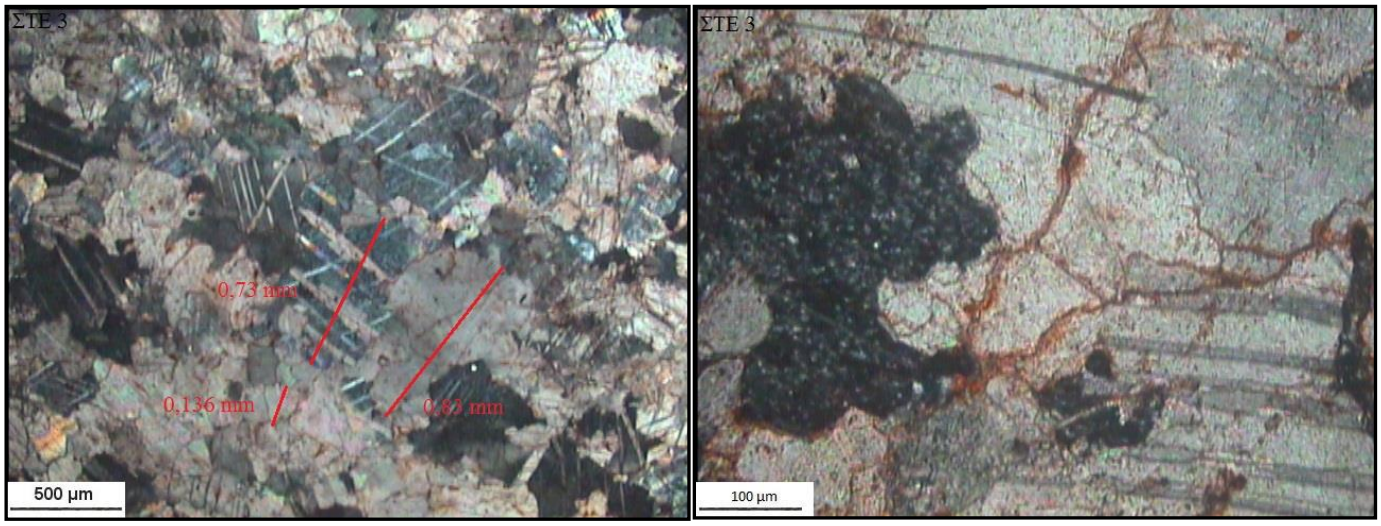
Description: Aliveri Grey can be applied to many construction works, such as wall cladding, interior and exterior flooring, stairs, paving, bathrooms and it is acceptable to all processing that can get a marble.

Ermou street, Athens: Paving with Aliveri Grey.

Interior flooring with Aliveri Grey.

Building of Ethniki Hellenic General Insurance Company: Exterior flooring, stairs and cladding with Aliveri Grey.

Petrography



Description: Photomicrograph of thin section, showing hypidiomorphic calcite crystals and dolomite veins or agglomerates. The texture is almost xenoblastic, recrystallization processes have taken place and oxides are along grain boundaries.

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 (%)	Dolimite (%)	Quartz (%)	Albite (%)	Opaque minerals (%)		
96	2	2	AM	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	0,5	0,1	95	14,8

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

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	
13,8	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
-	21	-	-	2150	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		
			3	-

Source of information: Hellenic Survey of Geology and Mineral Exploration

Chemical properties

Main elements

SiO_2 (%)	Al_2O_3 (%)	Fe_2O_3 (%)	TiO_2 (%)	MgO (%)	CaO (%)	Na_2O (%)	K_2O (%)	MnO (%)	P_2O_5 (%)	SO_3 (%)	LOI (%)
0,40	0,00	0,08	-	0,80	55,40	0,39	0,10	0,00	-	-	43,80

Trace elements

V (ppm)	Cr (ppm)	Mn (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	As (ppm)
1,0	17	21	2,5	19	6,5	16	5,0
Sr (ppm)	Cd (ppm)	Ba (ppm)	Pb (ppm)	Be (ppm)	Rb (ppm)	Bi (ppm)	U (ppm)
340	0,3	96	9,3	0,0	1,4	0,0	0,0
Sc (ppm)	Y (ppm)	Th (ppm)	Sb (ppm)	Ta (ppm)	Nb (ppm)	Zr (ppm)	Sn (ppm)
51	1,5	2,8	1,1	0,6	0,8		
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		
Commercial directory		
Scientific publication		
Other publication		

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