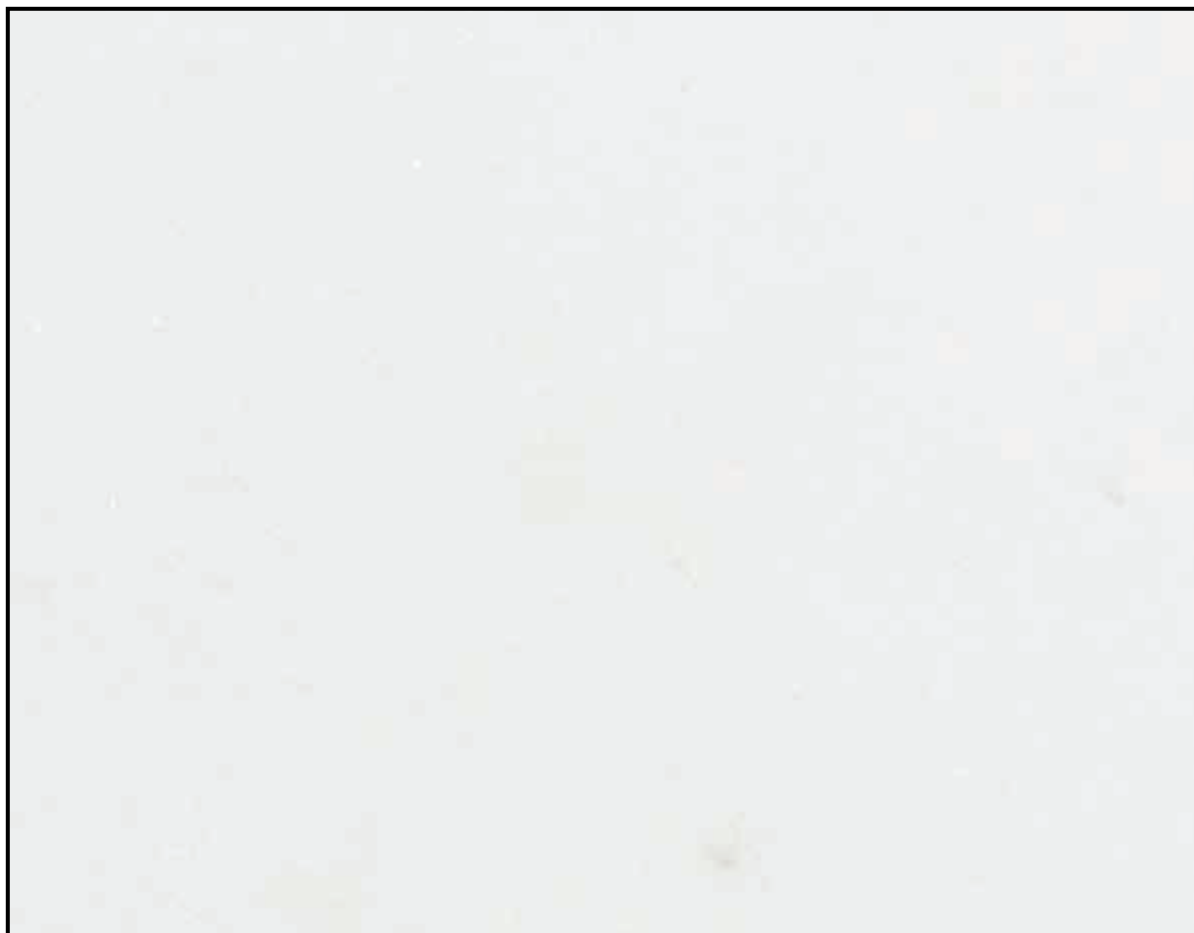


Thassos White

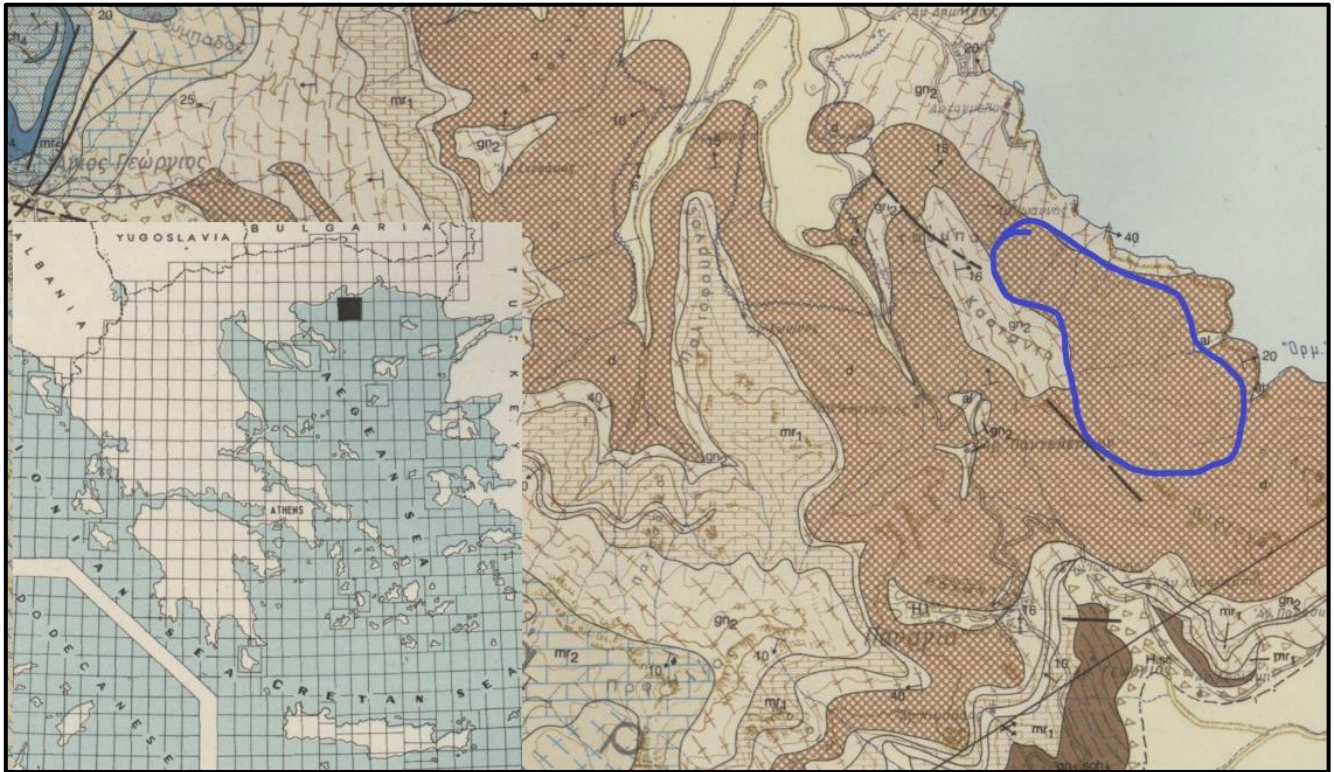


Scale 1:1

Short description: Medium grained snow white dolomitic marble with large calcite crystals.

Commodity (vocabulary)	Lithology (vocabulary)	Typical colour (code list)	Place of origin			
			Country	County / District / Province	Municipality / Community	Place/town / Village
Marble	Dolomitic marble	White	Greece	East Macedonia and Thrace	Thasos	Thasos

Geological setting



Geology: Thassos White (blue curve) is a metamorphic rock belonging to the carbonate marbles of Rhodope Mass area, which is part of the region of East Macedonia and Thrace.

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

Production: The most important quarry area is near the village of Limenas in the northeastern part of the island.

Geological age: -

Geological unit: Potamia Series

Application, use and heritage

Description: Thassos White Marble is known for many centuries all over the world for its pure sparkling whiteness, and it has been used by many architects, traders and builders both for marble various application purposes. It provides a high reflection of sunlight and holds its cool temperature, making it perfect suitable for claddings in warmer regions. Being a marble with high strength properties, it is suitable for interior and exterior use, wall cladding, flooring, stairs, and other design projects.



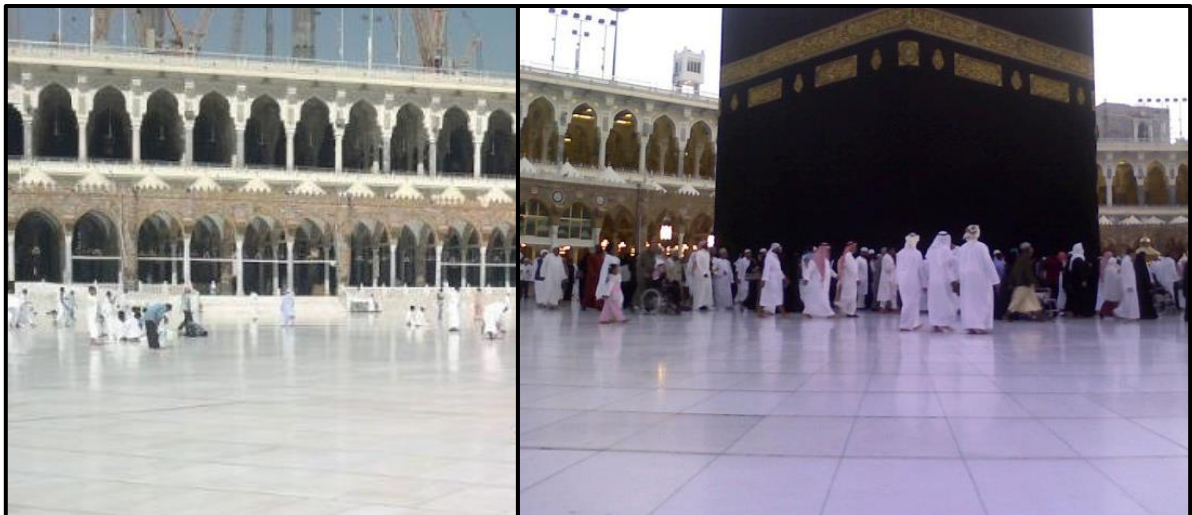
Shali Mosque, in the Chechen Republic of Russia: Interior and exterior cladding with Thassos White marble (completed in 2019).

(Photo: wikipedia)



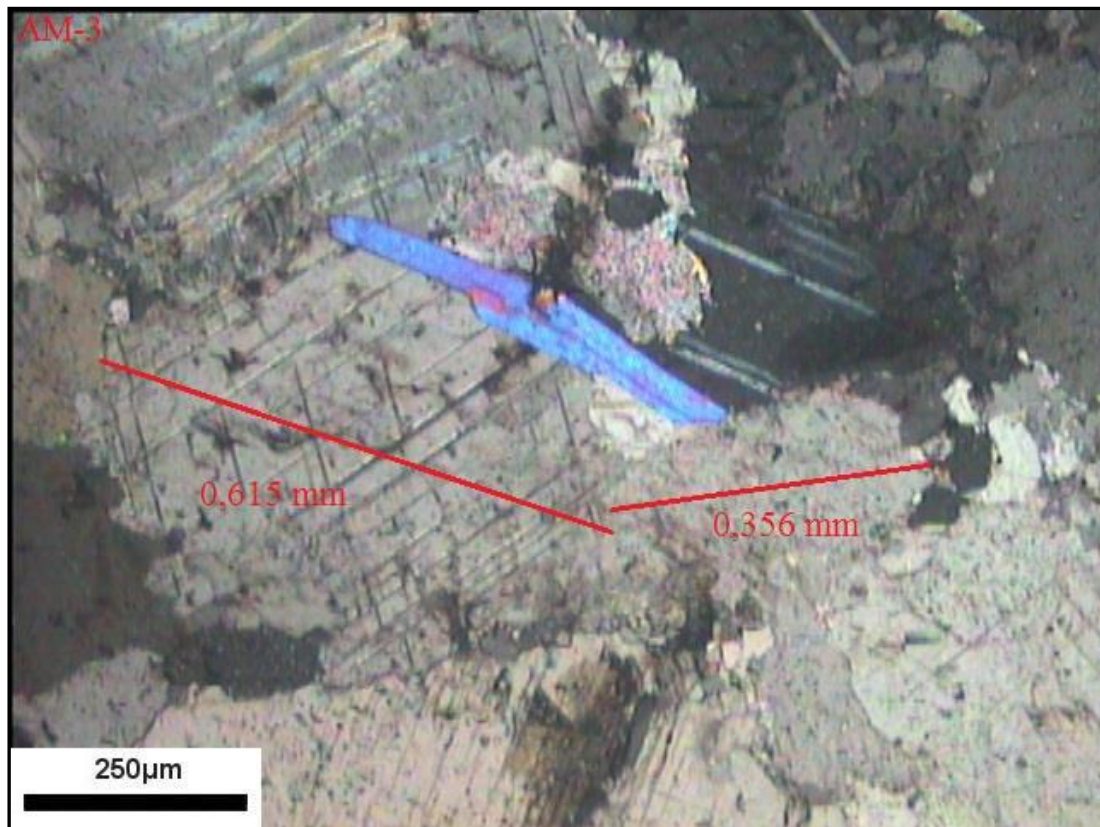
Masjid All Hayy Mosque in Sanford, USA: Wall cladding, flooring, artifacts, parapets, columns.

(Photo: *evensi*)



Religious Mecca Project, Makkah, KSA: Installation of Thassos tiles in the courtyards of the Grand Mosque. The new marble floor tiles maintain the same temperature day and night, allowing visitors to walk barefoot in the afternoons without feeling any heat. Thassos marble reflects the sunlight keeping its low temperature stabilized throughout the day.

Petrography



Description: Photomicrograph of thin section, showing dolomite crystals as well as crystals of phlogopite and muscovite.

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

Dolomite (%)	Calcite (%)	Muscovite (%)	Apatite (%)	Quartz (%)	Phlogopite (%)	
99	1	AM	AM	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
2840	0,7	0,2	164	18,5

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	
15,7	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
-	24	-	-	2250	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 (%)
<0,10	<0,10	<0,10	<0,10	19,90	30,40	1,38	0,18	<0,05	-	-	46,31

Trace elements

V (ppm)	Cr (ppm)	Mn (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	As (ppm)
0,3	25	18	2,5	8,0	5,0	14	0,6
Sr (ppm)	Cd (ppm)	Ba (ppm)	Pb (ppm)	Be (ppm)	Rb (ppm)	Bi (ppm)	U (ppm)
21	0,3	12	4,0	<0,1	0,3	<0,1	<0,1
Sc (ppm)	Y (ppm)	Th (ppm)	Sb (ppm)	Ta (ppm)	Nb (ppm)	Zr (ppm)	Sn (ppm)
6,5	0,5	0,2	0,1	0,7	0,5		
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	Wikipedia	https://en.wikipedia.org/wiki/Shali,_Chechen_Republic
Commercial directory		
Scientific publication		
Other publication	<i>evensi</i>	https://www.evensi.us/interfaith-iftar-masjid-hayy/256372582

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