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SULEYMAN DEMIREL UNIVERSITY
FACULTY OF ENGINEERING
DEPARTMENT OF MINING ENGINEERING

NATURAL STONE TECHNOLOGY LABORATORY
32260 ISPARTA

TECHNICAL REPORT

The physical, mechanical and petrographic properties in accordance with related standards of the marble sample called as "Ocean Grey" (201101200 license number is expressed) belongs to Adalya Marble Industry Trade Inc.

March – 2016
ISPARTA / TURKEY





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PREFACE

Various laboratory tests were applied in accordance with TS EN standards to determine the physical and mechanical properties and petrographic descriptions of marble samples called as **“Ocean Grey”** (201101200 license number is expressed and location: Gelendost/Isparta/Turkey) belongs to **Adalya Marble Industry Trade Inc.**. The results of tests are presented in Tables. 03 / 03 / 2016





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Sample Sender : Adalya Marble Industry Trade Inc.

Sample Name : Ocean Grey (license number : 201500204)

Date : 03 / 03 / 2016

PHYSICAL AND MECHANICAL PROPERTIES					
	Metric System		SI System		Standard
Hardness	Mohs	3.5 - 4	Mohs	3.5 - 4	TS 6809
Bulk Specific Gravity					
Dry	g/cm ³	2.703 ± 0.001	kg/m ³	2703 ± 1	TS EN 1936
Saturated	g/cm ³	2.704 ± 0.001	kg/m ³	2704 ± 1	
Density	g/cm ³	2.736 ± 0.011	kg/m ³	2736 ± 11	TS EN 1936
Water Abs. at Atm. Press.					
by Volume	%	0.176 ± 0.035	%	0.176 ± 0.035	TS EN 13755
by Weight	%	0.065 ± 0.013	%	0.065 ± 0.013	
Effective Porosity	%	0.176	%	0.176	TS EN 1936
Real Porosity	%	1.22	%	1.22	TS EN 1936
Fullness Ratio	%	98.78	%	98.78	TS 699
Water absorption coefficient by capillarity	g/m ² .s ^{0.5}	0.72 ± 0.15	g/m ² .s ^{0.5}	0.72 ± 0.15	TS EN 1925
Compressive Strength	kg/cm ²	1051 ± 13	MPa	103.0 ± 1.2	TS EN 1926
Compressive Strength after Freeze-Thaw (12 cyc.)	kg/cm ²	1008 ± 56	MPa	98.8 ± 5.5	TS EN 12371
Changing of Compressive Strength after Freeze-Thaw (-)	%	4.08	%	4.08	TS EN 12371
Decreasing of Weight after Freeze-Thaw	%	0.024	%	0.024	TS EN 12371
Flexural Strength Under Concentrated Load	kg/cm ²	105 ± 19	MPa	10.3 ± 1.9	TS EN 12372
Changing of Flexural Strength after Freeze-Thaw (-) (12 cyc.)	kg/cm ²	102 ± 13	MPa	10.0 ± 1.3	TS EN 12371
Changing of Flexural Strength after Freeze-Thaw (-)	%	3.22	%	3.22	TS EN 12371
Resist. to ageing by thermal shock					
by weight (-)	%	0.037	%	0.037	TS EN 14066
by modulus of elasticity (-)	%	8.58	%	8.58	
Water vapour resistance factor (dry)	μ-value	2.79	μ-value	2.79	TS EN 12524
Thermal conductivity (λ)	W/m.K	2.54	W/m.K	2.54	TS EN 12524 (Thermal resist.)
Abrasion Strength (Method-B/Bohme)	cm ³ /50cm ²	6.00 ± 0.4	cm ³ /50 cm ²	6.00 ± 0.4	TS EN 14157
Slip Resistance					
Dry	SRV	30.3 ± 1.7	SRV	30.3 ± 1.7	TS EN 14231
Wet		20.7 ± 1.7		20.7 ± 1.7	
P-Wave Velocity	m/s	6277 ± 31	m/s	6277 ± 31	TS EN 14579

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