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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 TS EN standards of the marble samples called as "Adonis" belongs to Adalya Marble Industry Trade Inc.

June – 2015
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 **"Adonis"** belongs to **Adalya Marble Industry Trade Inc.**. The results of tests are presented in Tables. 02 / 06 / 2015

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Company Name : **Adalya Marble Industry Trade Inc.**
Commercial Designation of Sample : **Adonis**

Date: **02 / 06 / 2015**

PHYSICAL AND MECHANICAL PROPERTIES					
	Metric System		**SI System**		**Standard**
Hardness	Mohs	3.5 – 4	Mohs	3.5 – 4	TS 6809
Bulk Specific Gravity Dry Saturated	 g/cm^3 g/cm^3	 2.703 ± 0.001 2.705 ± 0.001	 kg/m^3 kg/m^3	 2703 ± 1 2705 ± 1	TS EN 1936
Density	g/cm^3	2.726 ± 0.013	kg/m^3	2726 ± 13	TS EN 1936
Water Abs. at Atm. Press. by Volume by Weight	 % %	 0.244 ± 0.03 0.090 ± 0.01	 % %	 0.244 ± 0.03 0.090 ± 0.01	TS EN 13755
Effective Porosity	%	0.244	%	0.244	TS EN 1936
Real Porosity	%	0.84	%	0.84	TS EN 1936
Fullness Ratio	%	99.16	%	99.16	TS 699
Water absorption coefficient by capillarity	$g/m^2.s^{0.5}$	0.16 ± 0.03	$g/m^2.s^{0.5}$	0.16 ± 0.03	TS EN 1925
Compressive Strength	kg/cm^2	1536 ± 173	MPa	150.6 ± 17.0	TS EN 1926
Compressive Strength after Freeze-Thaw (12 cyc.)	kg/cm^2	1442 ± 97	MPa	141.4 ± 9.5	TS EN 12371
Changing of Compressive Strength after Freeze-Thaw (-)	%	6.11	%	6.11	TS EN 12371
Decreasing of Weight after Freeze-Thaw	%	0.007	%	0.007	TS EN 12371
Flexural Strength Under Concentrated Load	kg/cm^2	154 ± 12	MPa	15.1 ± 1.2	TS EN 12372
Changing of Flexural Strength after Freeze-Thaw (-) (12 cyc.)	kg/cm^2	143 ± 19	MPa	14.1 ± 1.9	TS EN 12371
Changing of Flexural Strength after Freeze-Thaw (-)	%	7.11	%	7.11	TS EN 12371
Resist. to ageing by thermal shock by weight (-) by modulus of elasticity (-)	 % %	 0.015 8.00	 % %	 0.015 8.00	TS EN 14066
Water vapour resistance factor (dry)	μ-value	279	μ-value	279	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)	$cm^3/50cm^2$	8.3 ± 0.2	$cm^3/50\ cm^2$	8.3 ± 0.2	TS EN 14157
Slip Resistance Dry Wet	SRV	39.1 ± 0.4 18.5 ± 0.5	SRV	39.1 ± 0.4 18.5 ± 0.5	TS EN 14231
P-Wave Velocity	m/s	6355 ± 78	m/s	6355 ± 78	TS EN 14579

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