

**STONE TEST CERTIFICATE**

Date Received	07 September 2010
Date Reported	10 October 2010
Date Revised	12 October 2010

Lab Ref.	MC2 12282/1- Rev 01*****
Client Ref.	--

Client	International Marble Co.LLC		
Project	Not given	Sampled by	Client*
Description	One Sample of Natural Marble Stone(Trade Name : Desert Rose)	Test Location	Exova,Azaiba Lab

**1. Introduction**

One sample of marble(natural),contents sawn cut specimens of dimensions as natural stone.was submitted to Exova laboratory on 07th September 2010 with a request to carry at following test

- 1.1 Density and Water Absorption(ASTM C 97) on 60x60x60mm cubical specimens
- 1.2 Compressive Strength(ASTM C 170) on 60x60x60mm cubical specimens
- 1.3 Modules of Rupture(ASTM C 99) on 200x100x57mm specimens
- 1.4 Crystallisation Test (BRE Report No.141) on 60x60x60mm cubical specimens
- 1.5 Porosity & Saturation Coefficient (BRE Report No:141) on 60x60x60mm cubical specimens
- 1.6 Wetting & Drying (BRE Report No:141) on 60x60x60mm cubical specimens
- 1.7 Abrasion Resistance(ASTM C 241/C 1353) on 60x60x60mm cubical specimens
- 1.8 Flexural Strength (ASTM C 880) on 380x100x32mm specimens
- 1.9 Visual Inspection(GSO 447/1994) on 300x300x50mm specimens

These tests were carried out in accordance with above mentioned test methods and the results obtained are as tabulated below

**2. Test Results**

**2.1 Density and Water Absorption (ASTM C 97)**

Specimen Ref.	Weight of Dried Specimen(g)	SSD Weight(g)	Weight in Water(g)	Density (kg/m <sup>3</sup> )	Absorption (%)
P 10-3136/1	168.8	169.5	106.0	2658	0.4
P 10-3136/2	169.6	170.3	106.6	2662	0.4
P 10-3136/3	166.5	167.3	104.3	2643	0.5
Average				2654	0.4

**2.2 Compressive Strength (ASTM C 170)**

Specimen Ref.	Test Condition	Compressive Strength (MPa)**
P 10-3137/1-5	Dry	143.7
P 10-3137/6-10	Wet	137.0

\*\* Average of 5 specimens

**2.3 Modulus of Rupture (ASTM C 99)**

Specimen Ref.	Test Condition	Modulus of Rupture (MPa)***
P 10-3138/1-5	Dry	13.8
P 10-3138/6-10	Wet	9.7

\*\*\* Average of 5 specimens

**2.4 Crystallistion Test (BRE Report No.141)**

Specimen Ref:	P 10-3139/1	P 10-3139/2	P 10-3139/3	P 10-3139/4	P 10-3139/5****
No. of cycles	15	15	15	15	15
Weight Loss/Gain (%)*****	+0.06	+0.17	+0.23	+0.12	+0.17
Mean weight Loss/Gain(%)	+0.15				

\*\*\*\* Average of 5 specimens

\*\*\*\*\*Note : (-ve)Sign indicates weight loss and (+ve) sign indicates weight gain.

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**2.5 Porosity & Saturation Coefficient (BRE Report No:141)**

Specimen Ref.	Porosity (%)*****	Saturation coefficient*****
P 10-3140/1-4	0.8	0.9

\*\*\*\*\*Average of 4 specimens

**2.6 Wetting & Drying (BRE Report No:141)**

Specimen Ref:	P- 10- 3141/1-3*****
No. of cycles	15
Observations	Pass.No Signs of delamination ,splitting or flaking after the test

\*\*\*\*\* Average of 3 specimens

**2.7 Abrasion Resistance(ASTM C 241-90/C1353)**

Exova Sample Reference	Trade Name	Abrasion Value	Abrasion Value	Abrasion Value	Mean Abrasion Resistance
		(Test A)	(Test B)	(Test C)	H <sub>v</sub> Value *****
P 10 - 3143	Natural Stone	11.83	13.12	13.16	12.70

\*\*\*\*\* This test was carried out in our approved subcontract lab in UK and abrasive used was 'Abralex' Grade 60 (Abralex is the equivalent to European 'Alundum' as specified in ASTM C241-90)

**2.8 Flexural Strength (ASTM C 880)**

Specimen Ref.	Test Condition	Flexural Strength (MPa)*****
P 10-3144/1-5	Dry	9.3
P 10-3144/6-10	Wet	8.4

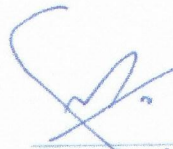
\*\*\*\*\* Average of 5 specimens

**2.9 Result of Visual Inspection(GSO 447/1994)**

Specimen	Findings of Visual Inspection
P 10-3142/1-3	Set of 3 tiles were visually examined in the laboratory(Megascopically) for the presence of any defects and the tiles are found to be free from the defects such as cracking,crazing,creeping,efflorescence,fissures and pitting

\*Sampling certificate was not given

\*\*\*\*\*Reason for revision : To exclude the information, about specific gravity in section 2.1 of this report, as instructed by client.



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For and on behalf of Exova Ltd. & Co. LLC

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