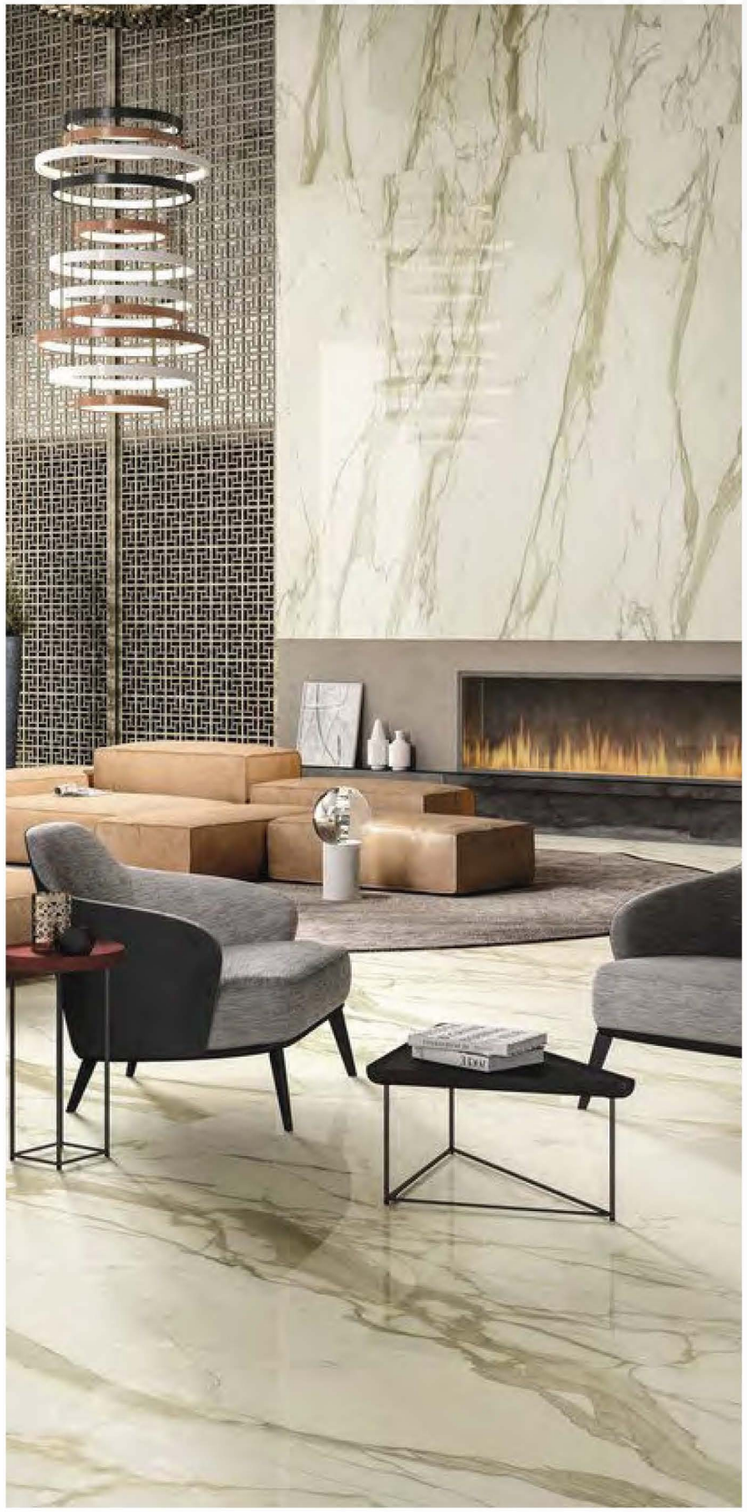
HASANOĞLU
GROUP

# Natural Stones Catalog

# About us:

At HASANOGLU GROUP, we have 7+ years of experience supplying and trading a diverse range of natural stones, offering customized solutions to meet the unique needs of our global clientele, With a commitment to quality and precision, we ensure that each product reflects the natural beauty and durability of Turkish natural stones.



## Tailored Solutions:

Hassanoglu provides tailored natural stones solutions for construction, architectural features, interior and exterior design, enhancing project aesthetics and functionality.

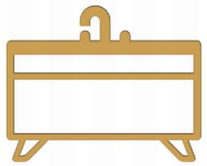
# Application

Airport

Restaurant

Offices

Shops



Fitted Kitchen And Bathroom Furniture

Hotels

Museums

Ventilated Curtain Walls

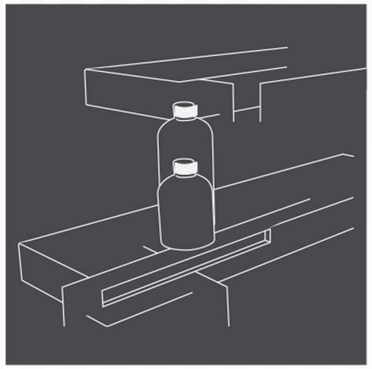
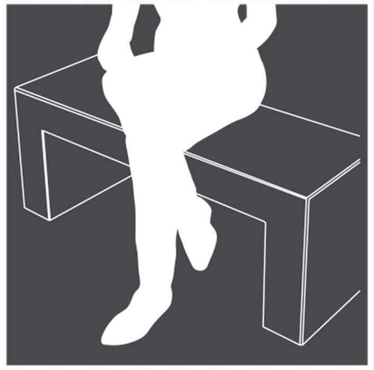
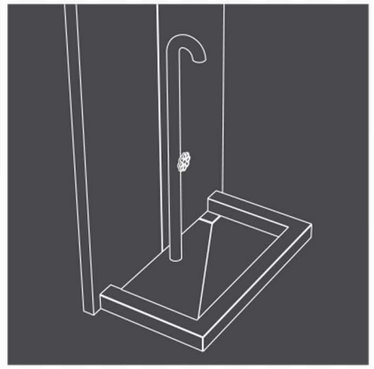
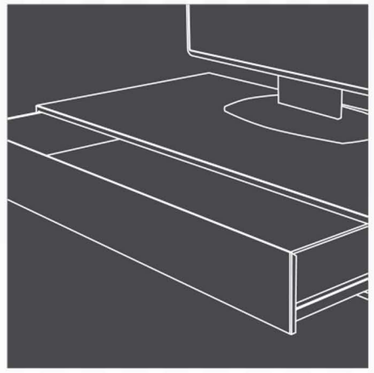
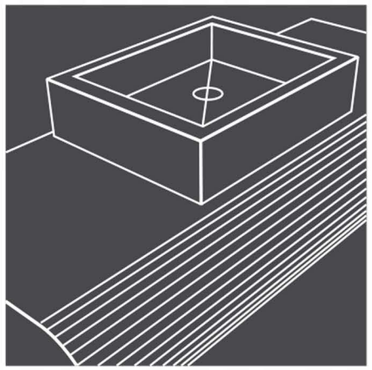
Retail Malls

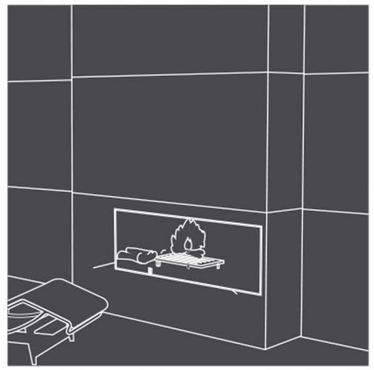
Spa And Wellness Centres

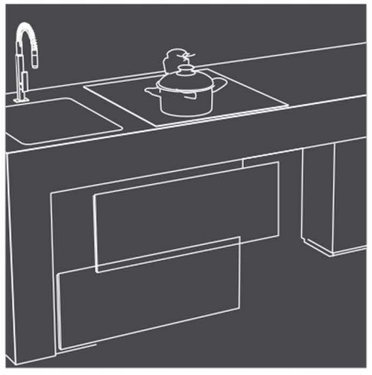
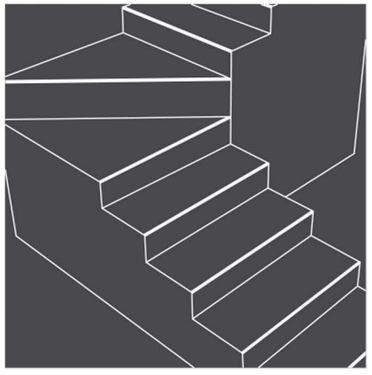
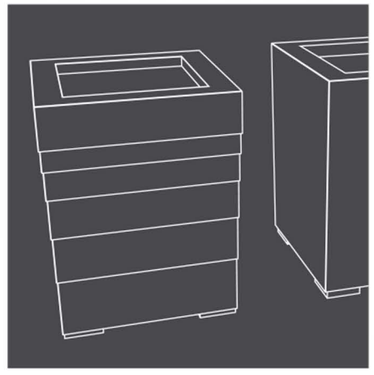
Homes

Interior Design And Furnishings

# Possibilities




## Variety of Finishes:

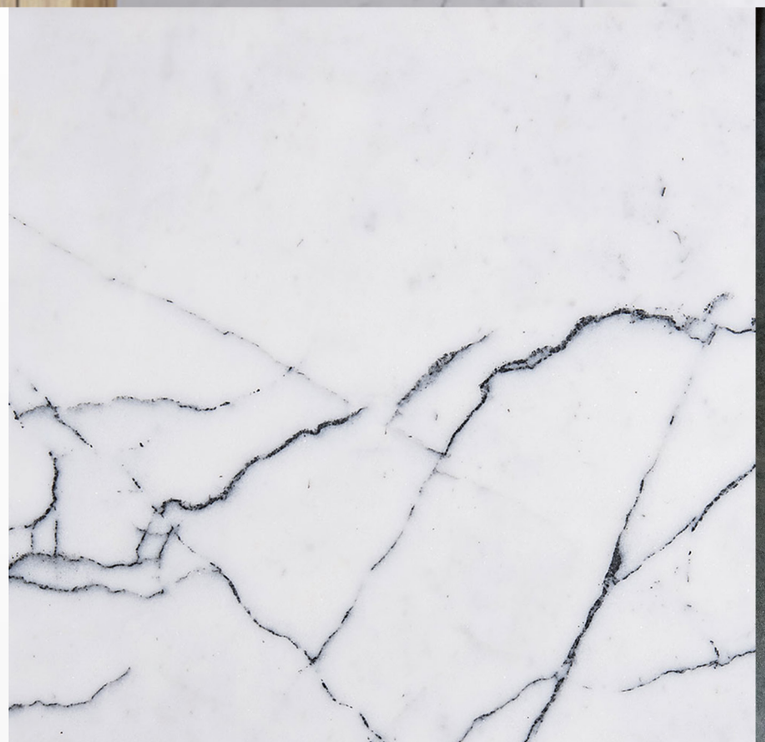
Choose from a variety of finishes, including polished, honed, brushed, and tumbled, to complement your design vision with high-quality, aesthetically appealing marble products.

# Precision in Processing and Packaging:

At Hassanoglu, we ensure precision in every stage, using advanced processing and meticulous inspection. Our secure packaging guarantees safe, timely delivery worldwide, whether for largequantities or bespoke orders.

# Our products

# Mugla-Newyork-Tile



# Analysis Report

LITHOLOGICAL AND GEOLOGICAL CHARACTERISTICS:

**Paleosoic aged Milas Kavaklıdere Marble is lithologically a recrystallised limestone and is found as lenses in metamorphical schistes. It has a white colour and occasional purple veins. It consists of calcite crystals of unit sizes between 300-500 microns showing pressure twinning and some calcite of 50-150 microns.**

GEOLOGICAL RESERVES: **20,000,000 m³**

BLOCK SITUATION AND USAGE AREAS:

**Block dimensions vary between 1,50 × 1,50 × 0,80 m and 2,40 × 2,40 × 1,80 m. Plates of 2 or 3 cm thick and desired dimensions can be produced.**
**Can be used in interior/exterior plating, floor covering or decoration.**
**There are some fractures in blocks locally. The suitability to take plate; to cut sides and corners; to be polished; the shapeability; and the cutting rate are all good. There isn't any rusting risk.**

**LİTOLOJİ VE JEOLOJİK ÖZELLİKLER:**

Paleozoyik yaşlı Milas Kavaklıdere mermeri, rekristalize kireçtaşı litolojilidir ve metamorfik şistler içinde bir mercek şeklinde yer almaktadır. Milas Kavaklıdere mermeri, beyaz renkte olup mor damarlar içermektedir. Mermer, örnek basınç ikizlenmesi gösteren ve hakim tane boyu 300 mikron ve 500 mikron arasında değişen kalsit minerallerinden ibarettir. Ayrıca tane boyu 50 mikron ve 150 mikron civarında olan kalsit mineralleri de saptanmıştır.

**JEOLOJİK REZERV:** 20.000.000 m³

**BLOK DURUMU VE KULLANIM ALANLARI:**

Blok boyutları; 1,50 × 1,50 × 0,80 m ile 2,40 × 2,40 × 1,80 m arasında değişmektedir. 2 ve 3 cm kalınlığında ve istenilen boyutlarda plakalar elde edilebilir.
İç ve dış kaplama, döşeme ve dekorasyonda kullanılabilir.
Blokta yer yer çatlaklar vardır. Plaka vermesi, kenar köşe kesilmesi, cilalanabilme ile şekiliendirilebilme yeteneği ve kesilme hızı iyidir. Paslanma tehlikesi yoktur.

PHYSICAL, MECHANICAL AND TECHNOLOGICAL SPECIFICATIONS:

| | | |
|---|---|---|
| **Hardness** | *(Mohs)* : | 3 |
| **Unit Volume Weight** | *(gr/cm³)* : | 2,72 |
| **Density** | *(gr/cm³)* : | 2,74 |
| **Water absorption at atmospheric pressure,** | ***by weight (%)*** : | 0,1 |
| | ***by volume (%)*** : | 0,2 |
| **Water absorption at boiling water,** | ***by weight (%)*** : | 0,1 |
| | ***by volume (%)*** : | 0,2 |
| **Porosity** | *(%)* : | 0,2 |
| **Compressive strength** | *(Kgf/cm²)* : | 1019 |
| **Compressive strength after freezing** | *(Kgf/cm²)* : | 1019 |
| **Strength to blow** | *(Kgf/cm²)* : | 23 |
| **Strength to bending** | *(Kgf/cm²)* : | 141 |
| **Modules of Elasticity** | *(Kgf/cm²)* : | $12,87 \times 10^4$ |
| **Ratio of fullness** | *(%)* : | 99,3 |
| **Degree of pores** | *(%)* : | 0,7 |
| **Average Abrasion Strength** | *(cm³/50 cm²)* : | 17,7 |
| **Average Tensile Strength** | *(Kgf/cm²)* : | 79 |

**FİZİKSEL, MEKANİK VE TEKNOLOJİK ÖZELLİKLER:**

| | | |
|---|---|---|
| Sertlik | *(Mohs)* : | 3 |
| Birim hacim ağırlığı | *(gr/cm³)* : | 2,72 |
| Özgül ağırlığı | *(gr/cm³)* : | 2,74 |
| Atmosfer basıncında su emme, | *ağırlıkça (%)* : | 0,1 |
| | *hacimce (%)* : | 0,2 |
| Kaynar suda su emme, | *ağırlıkça (%)* : | 0,1 |
| | *hacimce (%)* : | 0,2 |
| Porozite | *(%)* : | 0,2 |
| Basınç direnci | *(Kgf/cm²)* : | 1019 |
| Don sonrası basınç direnci | *(Kgf/cm²)* : | 1019 |
| Darbe direnci | *(Kgf/cm²)* : | 23 |
| Eğilme direnci | *(Kgf/cm²)* : | 141 |
| Elastisite modülü | *(Kgf/cm²)* : | $12,87 \times 10^4$ |
| Doluluk oranı | *(%)* : | 99,3 |
| Gözeneklilik derecesi | *(%)* : | 0,7 |
| Ortalama aşınma direnci | *(cm³/50 cm²)* : | 17,7 |
| Ortalama çekme direnci | *(Kgf/cm²)* : | 79 |

| CHEMICAL ANALYSIS | % |
|---|---|
| $SiO_2$ | 0,14 |
| $Fe_2O_3$ | 0,32 |
| CaO | 50,95 |
| MgO | 4,17 |

| **KİMYASAL ANALİZLER** | % |
|---|---|
| $SiO_2$ | 0,14 |
| $Fe_2O_3$ | 0,32 |
| CaO | 50,95 |
| MgO | 4,17 |

PETROGRAPHICAL ANALYSİS:

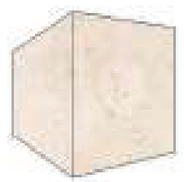
**The sample consists of calcite crystals of unit sizes between 300-500 microns showing pressure twinning and some calcite of 50-150 micron sizes.**

**PETROGRAFİK ANALİZLER:**

Örnek basınç ikizlenmesi gösteren ve hakim tane boyu 300 mikron - 500 mikron arasında değişen kalsit minerallerinden ibarettir. Ayrıca, tane boyu 50 - 150 mikron civarında olan kalsit mineralleri de saptanmıştır.

## Traverten Premium Vein Cut

## Traverten Premium Cross Cut



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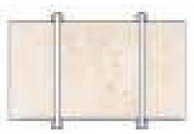
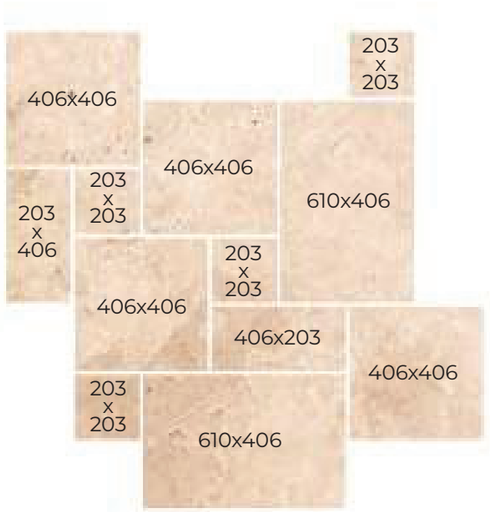


Slab

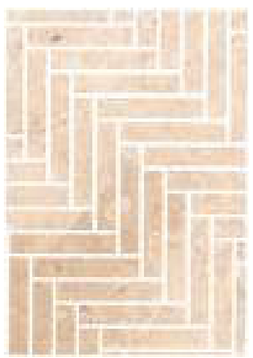
Cut to size

# DESENLER PATTERNS



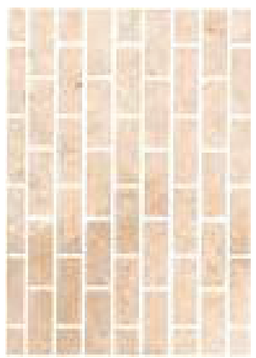

Herringbone

Diagonal Herringbone

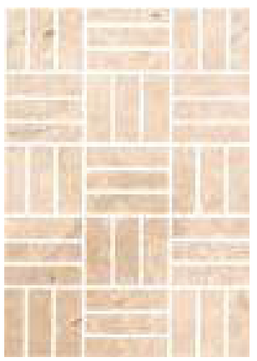


Double Herringbone

Brick



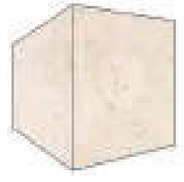
Basket



Diagonal Basket

## Yellow Travertine Vein Cut

## Yellow Travertine Cross Cut



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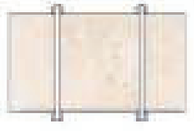

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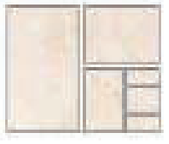

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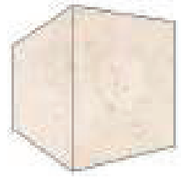
## Noche Travertine Vein Cut

## Noche Travertine Cross Cut



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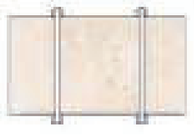

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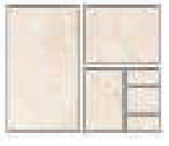

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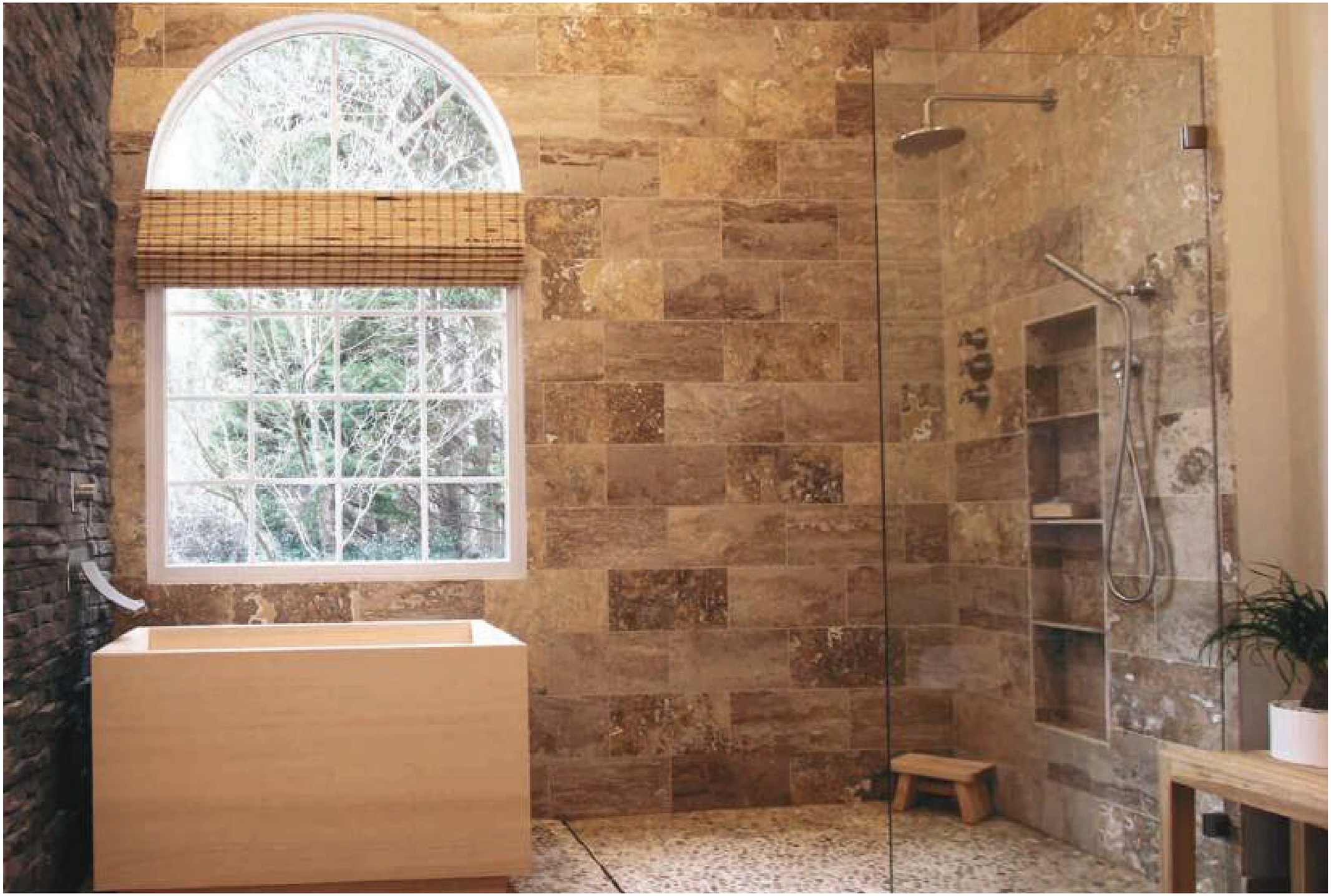
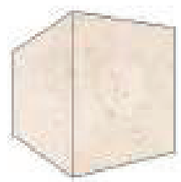






# Ottoman Beige



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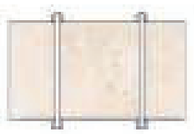

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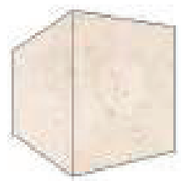
# Baiyulan



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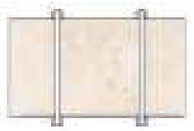

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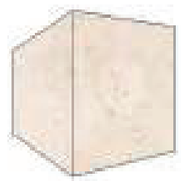
# Shandian



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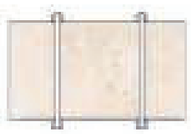

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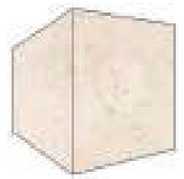
# Latte Beige



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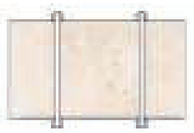

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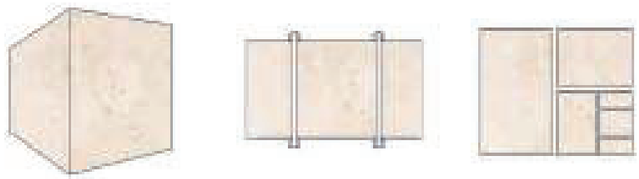
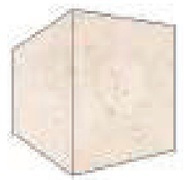
# Sofita



Block Slab Cut to size

# Sunset



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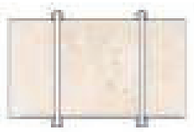

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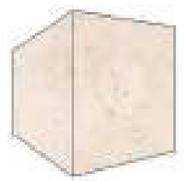
# Manyas White



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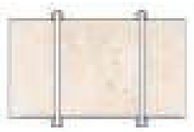

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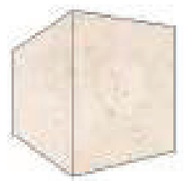
# Marmara Equator



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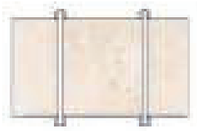

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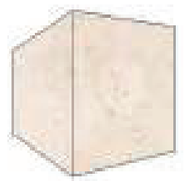
# Mugla White



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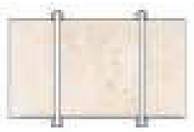

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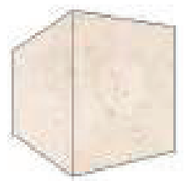
# Calacatta



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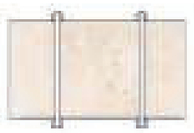

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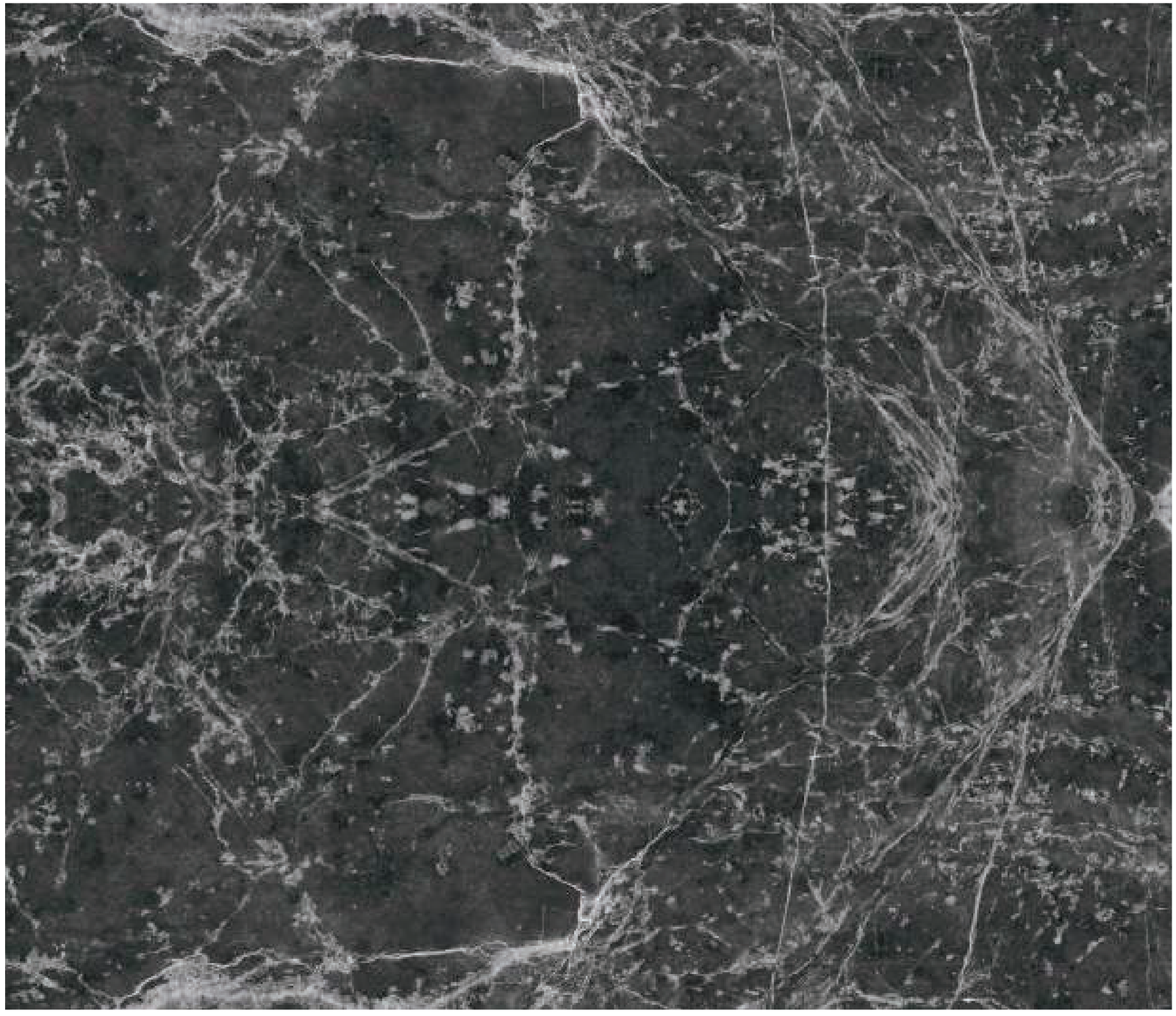
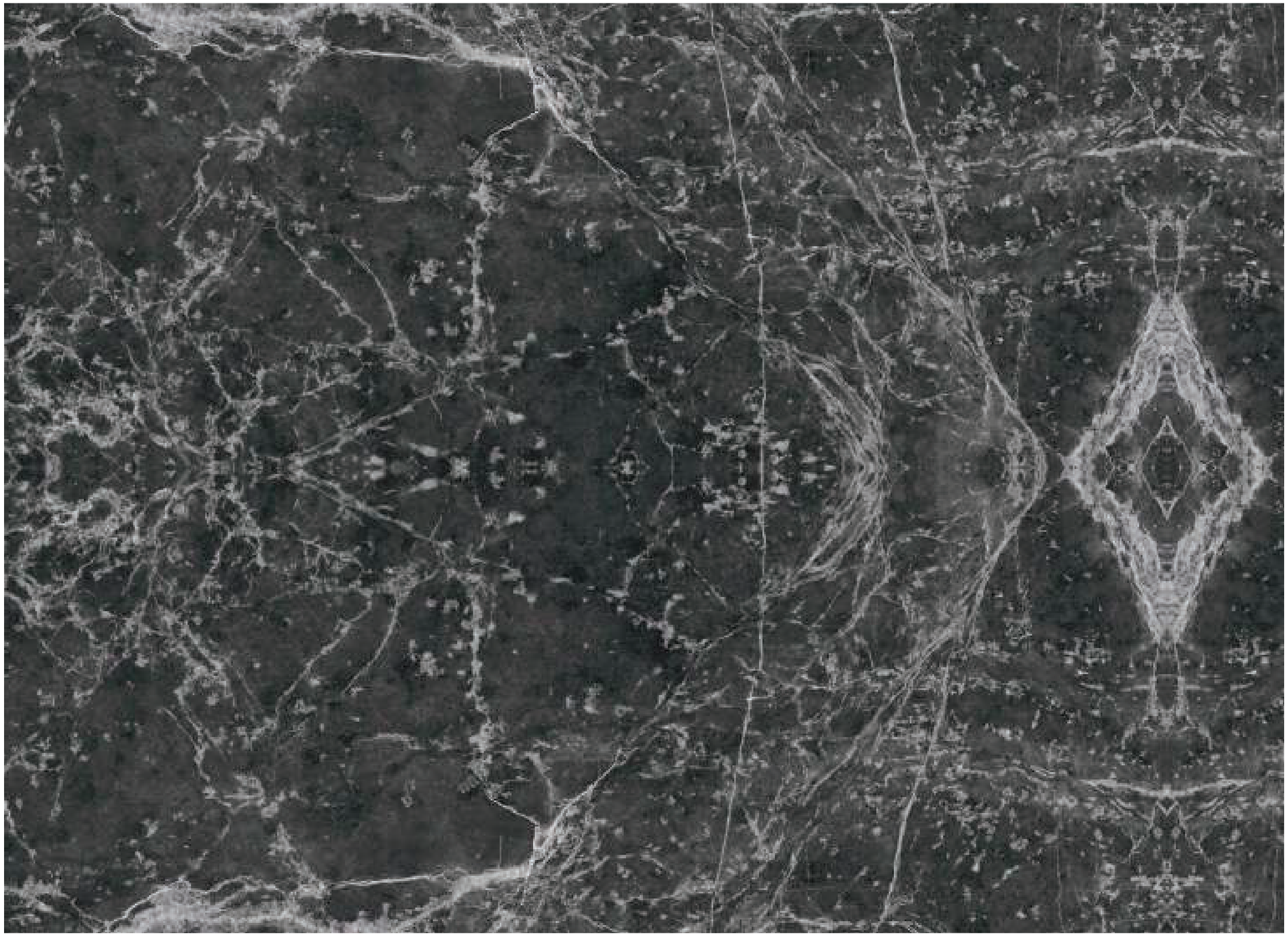
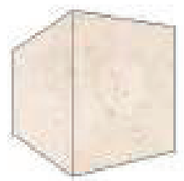
# MARBLE BOOKMATCH





# Dolomite White



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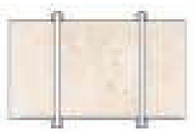

Slab

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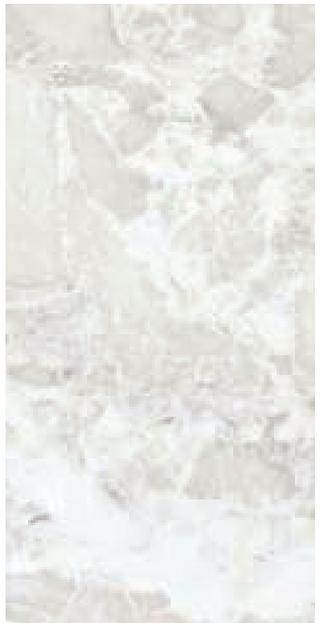
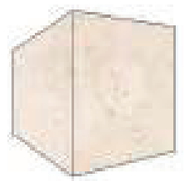


# Active Dolomite



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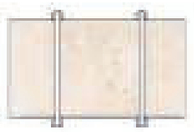

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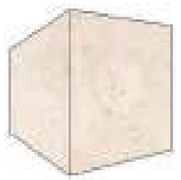
Cut to size

# Toros Black



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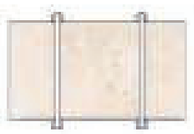

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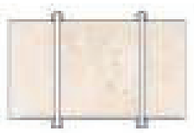
Cut to size

## Silver Grey Vein Cut

Block



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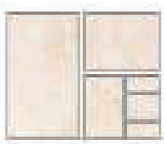
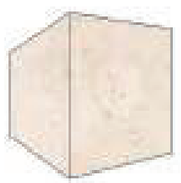


Cut to size

# Silver Grey Cross Cut



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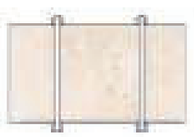

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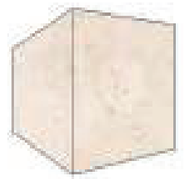
Cut to size

# Emperador



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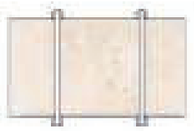

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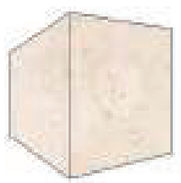
# Kaman Green Vein Cut



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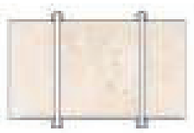
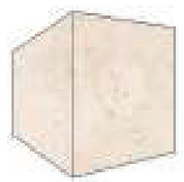


Slab

Cut to size

# Kaman Green Cross Cut



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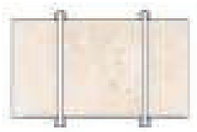

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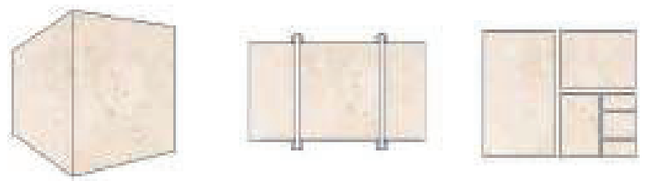
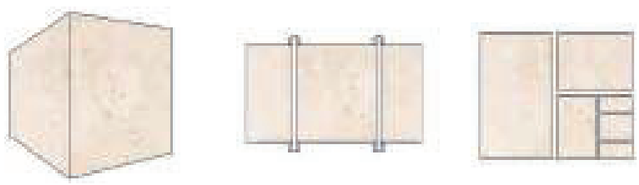
Cut to size

# Onyx

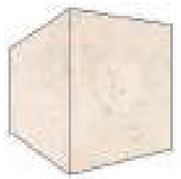


# Kircicegi Granite



Block Slab Cut to size

# Anatolian Grey Granite



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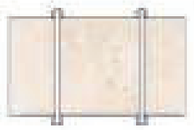

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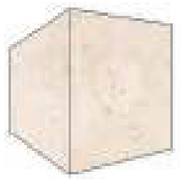
# Yaylak Granite



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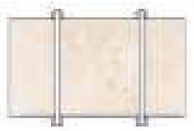

Slab

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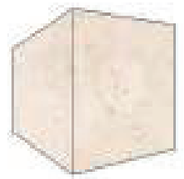
# Limestone Classic



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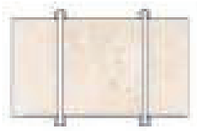

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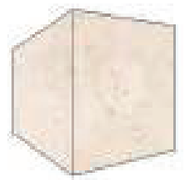
# Limestone Sesame



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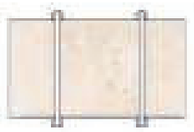

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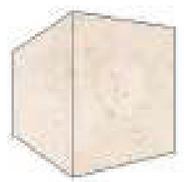
# Limestone Cloudy



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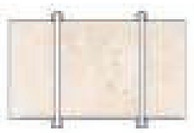

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# Analysis Report

| **TESTLER** *(Tests)* | **Standart** *(Standard)* | **Ölçülen Değer** *(Measurements)* | **Ortalama** *(Average)* |
|---|---|---|---|
| Tek Eksenli Basınç Dayanımı (MPa) *(Uniaxial Compressive Strength)* | TS EN 1926 | 104,20<br>120,45<br>122,44<br>98,78<br>103,46<br>94,88 | **107,38 MPa (1095,44 kgf/cm²)** |
| Eğilme Dayanım (MPa) *(Bending strength)* | TS EN 13161 | 21,44<br>20,58<br>14,30<br>16,86<br>14,31<br>14,43<br>18,42<br>14,94<br>18,82<br>14,90 | **16,91 MPa (172,44 kgf/cm²)** |
| Eğilme Dayanım (MPa) *(Bending strength)* | TS EN 12372 | 11,86<br>11,11<br>15,82<br>12,88<br>19,00<br>17,76<br>18,17<br>17,29<br>16,64<br>15,46 | **15,61 MPa (159,18 kgf/cm²)** |
| Aşınma Dayanım Direnci *(Strength of Abrasion)* | EN 14157 | 13,97<br>13,33<br>13,12<br>14,17<br>14,47<br>14,61 | **14,00 mm** |
| Atmosfer Basıncında Su Emme (%) *(Water Absorption)* | TS EN 13755 | 0,55<br>0,56<br>0,59<br>0,58<br>0,60<br>0,56 | **% 0,57** |
| Kılcal Etkiye Bağlı Su Emme Katsayısı ($gr/m^2.s^{0,5}$) *(Water absorption coefficient by capillarity)* | TS EN 1925 | 3,18<br>2,82<br>3,02<br>2,84<br>2,97<br>2,96 | **2,97 $gr/m^2.s^{0,5}$** |

**MİNERALOJİK VE PETROGRAFİK ANALİZ**
*(The Mineralogical and Petrographic Analysis)*

**MAKROSKOBİK İNCELEMELER** *(Macroscopic Properties)*

Kayaç içersinde makro olarak kuvars, ortoklas, plajioklas ve biyotit mineralleri gözlenmektedir.

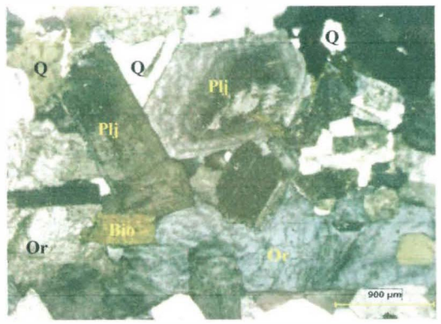
**MİKROSKOBİK İNCELEMELER** *(Microscopic Properties)*

Holokristalin doku sunan kayaç kuvars, ortoklas, plajioklas ve biyotit minerallerinden oluşmaktadır (Şekil 1). Kayacı oluşturan minerallerin minimum, maksimum ve ortalama tane boyutları tablo 1' de verilmiştir.

Tablo 1: Kayaç içersindeki mineral tane boyutları.

| **Mineral Adı** | **Min. Tane Boyutu (µm)** | **Maks. Tane Boyutu (µm)** | **Ort. Tane Boyutu (µm)** |
|---|---|---|---|
| Kuvars | 756,9 | 3330,3 | 1555,2 |
| Ortoklas | 304,2 | 4362,1 | 2472,5 |
| Plajioklas | 493,9 | 3424,8 | 1425 |
| Biyotit | 186,7 | 1119,7 | 577,3 |

Kayaç %27 kuvars, %58 ortoklas, %14 plajioklas, %10 ve üzeri mafik minerallerden oluşmaktadır. Bu değerlere göre yapılan QAP eşleşmesinde kayaç granit olarak isimlendirilmiştir.




Şekil 1: Kayaç içersinde gözlenen kuvars (Q), ortoklas (Or), plajioklas (Plj) ve biyotit (Bio) mineralleri.

**PETROGRAFİK TANIM** *(Petrographic Identification)*

Kayaç Grubu: Magmatik – derinlik kayacı

Kayaç Tanımı: Granit

Petrografik incelemeler TS EN 12407'ye göre yapılmıştır.
*Petrographic analysis* are carried out according to TS EN 12407.

(Devamı)

| | | | |
|---|---|---|---|
| Ses Yayılma Hızı (m/s) *(Ultrasonic Velociy)* | TS EN 14579 | 2940<br>2350<br>2389<br>2341<br>2491<br>2517 | **2504 m/s** |
| Knoop Sertliği *(Knoop hardness)* | TS EN 14205 | | **180** |
| Mohs Sertliği *(Mohs hardness)* | Dönüşüm Çizelgesi | 180 HK | **3** |

Kaymazlık Test Sonucu

| | |
|---|---|
| Numune Boyutu (cm) (Sample Dimension) | *120 20 3* |
| Numunenin Yüzey İşleme Tekniği (Application of Surface Treatment Sample) | Cilalı |
| Test Sonucu (Test Result) | 23,26° |
| Test Sonucuna göre Sınıflandırması (Classification of Test Result) | B* |

**Not: Sınıflandırma çizelgesi aşağıda verilmiştir.*

DIN 51097 Standardına Uygun Sınıflandırma Özellikleri

| *Açı değeri* | | *Uygulama alanı* |
|---|---|---|
| *A≥ 12* |  | • *Genellikle kuru iken yalınayak kullanılan koridorlar,*<br>• *Tek yada grup soyunma odaları (sporcular için),*<br>• *Tüm yüzme havuzlarında, derinliği 80 cm olmayan sığ yüzme havuzlarında.* |
| *B≥ 18* |  | • *A sınıflandırması içinde belirtilen alanlar dışındaki yalınayak kullanılan koridorlar,*<br>• *Dezenfektan spreyleri için oluşturulan alanlar,*<br>• *Yüzme havuzu çevresindeki alanlar,*<br>• *Platformlar,*<br>• *Çocuk havuzları,*<br>• *Yağmurlu alanlardaki merdivenler,*<br>• *Yüzme havuzu dışındaki merdiven basamakları.* |
| *C≥ 24* |  | • *Havuzların kıyı eğimlerinde,*<br>• *B sınıflandırmasında yer almayan su içindeki merdivenler.* |

# Mugla-Newyork-Tile

# Analysis Report

| TEST / ANALİZLER *Test / Analysis* | TEST / ANALİZ METODU *Test / Analysis Method* |
|---|---|
| *Pandül deney donanımıyla kayma direncinin tayini (Kuru zeminde) *(Determination of the slip resistance by means of the pendulum tester)(Dry Conditions)* | TS EN 14231 |

| Test No | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 |
|---|---|---|---|---|---|---|
| **Numune Boyutu (mm)** *(Sample Size)* | 200x100x20 | 200x100x20 | 200x100x20 | 200x100x20 | 200x100x20 | 200x100x20 |
| **Sıkaladan Okunan Değer (SRVd°)** *(The value read scale)* | 24 | 25 | 25 | 24 | 24 | 25 |
| **Sıkaladan Okunan Değer (180° döndürülmüş durumda) (SRVd°)** *(The value read scale Roteted 180°)* | 25 | 24 | 25 | 23 | 24 | 24 |
| **Ortalama Değer (SRVd°)** *(Average Value)* | 24,3 | | | | | |

| TEST / ANALİZLER *Test / Analysis* | TEST / ANALİZ METODU *Test / Analysis Method* |
|---|---|
| *Kılcal etkiye bağlı su emme katsayısının tayini *(Determination of water absorption coefficient by capillarity)* | TS EN 1925 |

| Test No | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 |
|---|---|---|---|---|---|---|
| **Numune Boyutu (mm)** *(Sample Size)* | 50,89x50,47 | 50,58x50,57 | 50,21x50,87 | 50,69x50,70 | 50,53x51,00 | 51,80x50,41 |
| **Sonuçlar ($gr/m^2.s^{0,5}$)** *(Results)* | 0,15 | 0,92 | 0,46 | 0,31 | 0,30 | 0,23 |
| **Ortalama Değer ($gr/m^2.s^{0,5}$)** *(Average Value)* | 0,40 | | | | | |
| **Standart Sapma** *(Standard Deviation)* | 0,28 | | | | | |

| TEST / ANALİZLER *Test / Analysis* | TEST / ANALİZ METODU *Test / Analysis Method* |
|---|---|
| *Yoğun yük altında bükülme dayanımı tayini *(Determination of flexural strength under concentrated load)* | TS EN 12372 |

| Test No | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 | Test 7 | Test 8 | Test 9 | Test 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Genişlik (mm)** *(Width)* | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| **Kalınlık (mm)** *(Thickness)* | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| **Numunenin Boyu (mm)** *(Sample Size)* | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 360 |
| **Mesnetler Arasındaki Mesafe (mm)** *(Distance between lateral supports)* | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| **Diklikten Sapma** *(Deviation from perpendicularity)* | 0,2 | 0,3 | 0,2 | 0,2 | 0,3 | 0,1 | 0,2 | 0,1 | 0,3 | 0,2 |
| **Kırılma Yükü (kN)** *(Breaking Load)* | 3,62 | 2,68 | 2,83 | 4,50 | 3,22 | 3,22 | 2,35 | 3,41 | 2,03 | 2,94 |
| **Sonuç (MPa)** *(Result)* | 7,18 | 5,01 | 5,61 | 8,92 | 6,38 | 6,38 | 4,66 | 6,76 | 4,03 | 5,83 |
| **Ortalama Değer (MPa)** *(Average Value)* | 6,11 | | | | | | | | | |
| **Standart Sapma** *(Standard Deviation)* | 1,40 | | | | | | | | | |

| Rapor No: 207 *Report No* | Sayfa: 2/2 *Page* | | | |
|---|---|---|---|---|
| **TEST / ANALİZLER** *Test / Analysis* | **Test/Analiz Metodu** *Test/Analysis Method* | **Birim** *Unit* | **Sonuçlar** *Results* | **Standart Sapma** *Standard Deviation* |
| *Don tesirlerine dayanıklılık ve don sonrası basınç dayanımı *Determination of frost resistance* | TS EN 12371 | Kırma. Mpa | 145 | 14.00 |
| | | Kütle k.,% | 0 | - |
| *Sabit moment altında eğilme dayanımının tayini *Determination of flexural strength under constant moment* | TS EN 13161 | Mpa | 8,13 | 1,49 |
| *Yoğun yük altında bükülme dayanımı tayini *Determination of flexural strength under concentrated load* | TS EN 12372 | Mpa | 6,11 | 1,40 |
| *Kılcal etkiye bağlı su emme katsayısının tayini *Determination of water absorption coefficient by capillarity* | TS EN 1925 | $gr/m^2.s^{0,5}$ | 0,40 | 0,28 |
| Parlaklık Tayini (60°) (Brightness) | - | Gloss | 73,80 | 3,92 |

| | Rapor No: 207 *Report No* | Sayfa: 1/2 *Page* |
|---|---|---|
| **Numunenin Adı ve Tarifi:** R.N: 201000236 - ***Sample Name and Identity*** | **Deneylerin Yapıldığı Tarih / *Date of Tests*** 24.12.2014-08.01.2015 | **Rapor Tarihi:** ***Report Date*** 15.01.2015 |

| TEST / ANALİZLER *Test / Analysis* | Test / Analiz Metodu *Test / Analysis Method* | Birim *Unit* | Sonuçlar *Results* | Standart Sapma *Standard Deviation* |
|---|---|---|---|---|
| *Basınç dayanımı tayini *Determination of compressive strength* | TS EN 1926 | Mpa | 121 | 10,00 |
| *Knoop sertliğinin tayini *Determination of Knoop hardness* | TS EN 14205 | HK | 157 | - |
| | | HK25/HK75 | 0,91 | |
| | | Mohs | 3,5-4 | |
| *Görünür yoğunluk tayini *Determination of real density* | TS EN 1936 | $kg/m^3$ | 2642 | 9,02 |
| *Açık gözeneklilik tayini *Determination of apparent density* | TS EN 1936 | % | 0,43 | 0,13 |
| *Toplam gözeneklilik tayini *Determination of total porosity* | TS EN 1936 | % | 3,23 | 0,36 |
| *Pandül deney donanımıyla kayma direncinin tayini (Kuru) *Determination of the slip resistance by means of the pendulum tester (Dry)* | TS EN 14231 | SRVd° | 24,3 | 0,65 |
| *Pandül deney donanımıyla kayma direncinin tayini (Islak) *Determination of the slip resistance by means of the pendulum tester (Wet)* | TS EN 14231 | SRVd° | 6,1 | 0,51 |
| *Ses hızı ilerlemesinin tayini *Determination of sound speed propagation* | TS EN 14579 | Km/s | 5,278 | 0,19 |
| *Özgül kütle *Specific Gravity of Soil Solids by Gas Pycnometer* | ASTM D-5550-06 | $kg/m^3$ | 2732 | 28,20 |
| *Aşınma direnci tayini *Determination of abrasion resistance* | TS EN 1341Ek C | mm | 17,62 | 0,31 |

Tundra Ocean Visual

Papillon Exotic Visual

# Analysis Report

**Güneş Işığı Yansıtma** / *Solar Reflectance*
**ASTM C1519**

| Ölçüm *Reading* | Test Koşulu : Kuru *Test Condition : Dry* | | | Test Koşulu : Doygun *Test Condition : Saturated* | | |
|---|---|---|---|---|---|---|
| | Numune 1 *Sample 1* | Numune 2 *Sample 2* | Numune 3 *Sample 3* | Numune 4 *Sample 4* | Numune 5 *Sample 5* | Numune 6 *Sample 6* |
| 1 | 0,701 | 0,698 | 0,707 | 0,605 | 0,649 | 0,627 |
| 2 | 0,693 | 0,681 | 0,705 | 0,627 | 0,639 | 0,641 |
| 3 | 0,725 | 0,697 | 0,703 | 0,636 | 0,636 | 0,649 |
| 4 | 0,680 | 0,711 | 0,705 | 0,646 | 0,656 | 0,63 |
| 5 | 0,700 | 0,697 | 0,651 | 0,653 | 0,663 | 0,656 |
| 6 | 0,673 | 0,691 | 0,688 | 0,646 | 0,669 | 0,543 |
| 7 | 0,694 | 0,734 | 0,705 | 0,644 | 0,646 | 0,639 |
| 8 | 0,730 | 0,724 | 0,727 | 0,640 | 0,642 | 0,614 |
| 9 | 0,690 | 0,722 | 0,725 | 0,636 | 0,661 | 0,666 |
| **Ortalama** *Average* | **0,698** | **0,706** | **0,702** | **0,637** | **0,651** | **0,629** |
| | **0,702** | | | **0,639** | | |

**Isıl Yayılım** / *Thermal Emissivity*
**ASTM C1371**

| Test Koşulu : Kuru *Test Condition : Dry* | | | Test Koşulu : Doygun *Test Condition : Saturated* | | |
|---|---|---|---|---|---|
| Numune 1 *Sample 1* | Numune 2 *Sample 2* | Numune 3 *Sample 3* | Numune 4 *Sample 4* | Numune 5 *Sample 5* | Numune 6 *Sample 6* |
| 0,892 | 0,891 | 0,890 | 0,941 | 0,941 | 0,941 |
| **0,891** | | | **0,941** | | |

**Güneş Işığı Yansıtma İndeksi (SRI)** / *Solar Reflectance Index (SRI)*
**ASTM E1980 (Yaklaşım II** / *Approach II)*

| Test Koşulu / *Test Condition* | Taşınım Katsayısı / *Convective Coefficient* | | |
|---|---|---|---|
| | Düşük / *Low* 5 $Wm^{-2}K^{-1}$ | Orta / *Medium* 12 $Wm^{-2}K^{-1}$ | Yüksek / *High* 30 $Wm^{-2}K^{-1}$ |
| Kuru / *Dry* | **85,4** | **85,6** | **85,9** |
| Doygun / *Saturated* | **78,4** | **78,2** | **78,1** |

| Özellik / *Property* | Standart *Standard* | Test koşulu *Test condition* | Deney sayısı *Number of tests* | En küçük *Lowest* | En büyük *Highest* | Ortalama *Average* |
|---|---|---|---|---|---|---|
| **Görünür yoğunluk (kg/$m^3$)** *Bulk specific gravity* | ASTM C 97-02 | - | 6 | 2707 | 2711 | **2709 ± 1** |
| **Hacimce su emme (%)** *Water absorption by volume (Open porosity)* | ASTM C 97-02 | - | 6 | 0,20 | 0,30 | **0,23 ± 0,04** |
| **Ağırlıkça su emme (%)** *Water absorption by weight* | ASTM C 97-02 | - | 6 | 0,07 | 0,11 | **0,09 ± 0,01** |
| **Basınç dayanımı (MPa)** *Compressive strength* | ASTM C 170 - 99 | Dry | 6 | 141,5 | 165,9 | **153,2 ± 9,6** |
| **Basınç dayanımı (MPa)** *Compressive strength* | ASTM C 170 - 99 | Wet | 6 | 111,8 | 132,1 | **123,2 ± 10,3** |
| **Sabit moment altında eğilme dayanımı (MPa)** *Flexural strength* | ASTM C 880 - 98 | Dry | 6 | 8,1 | 10,3 | **9,2 ± 1,0** |
| **Sabit moment altında eğilme dayanımı (MPa)** *Flexural strength* | ASTM C 880 - 98 | Wet | 6 | 5,1 | 7,6 | **6,3 ± 1,3** |
| **Yoğun yük altında bükülme dayanımı (MPa)** *Modulus of Rupture* | ASTM C 99 - 00 | Dry | 6 | 15,5 | 18,9 | **16,9 ± 1,4** |
| **Yoğun yük altında bükülme dayanımı (MPa)** *Modulus of Rupture* | ASTM C 99 - 00 | Wet | 6 | 11,9 | 17,9 | **15,1 ± 3,0** |
| **Aşınma Dayanımı (Metod-B/Böhme) ($cm^3$/50$cm^2$)** *Abrasion strength* | TS EN 14157 | Dry | 4 | 5,1 | 6,4 | **5,6 ± 0,7** |

| Özellik / *Property* | Standart *Standard* | Deney sayısı *Number of tests* | En küçük *Lowest* | En büyük *Highest* | Ortalama *Average* |
|---|---|---|---|---|---|
| **Basınç dayanımı (MPa)** *Compressive strength* | TS EN 1926 | 6 | 141,5 | 165,9 | **153,2 ± 9,6** |
| **Don sonrası basınç dayanımı (12 çevrim) (MPa)** *Compressive strength after freeze-thaw (12 Cycle)* | TS EN 12371 | 5 | 131,7 | 148,8 | **142,3 ± 7,1** |
| **Don sonrası kütle kaybı (12 çevrim) (%)** *Decreasing of weight after freeze-thaw (12 Cycle)* | TS EN 12371 | 5 | 0,026 | 0,076 | **0,059 ± 0,019** |
| **Don sonrası basınç dayanımı (48 çevrim) (MPa)** *Compressive strength after freeze-thaw (48 Cycle)* | TS EN 12371 | 5 | 116,1 | 123,3 | **119,3 ± 3,6** |
| **Don sonrası kütle kaybı (48 çevrim) (%)** *Decreasing of weight after freeze-thaw (48 Cycle)* | TS EN 12371 | 5 | 0,127 | 0,229 | **0,192 ± 0,045** |
| **Don sonrası basınç dayanımı (76 çevrim) (MPa)** *Compressive strength after freeze-thaw (76 Cycle)* | TS EN 12371 | 5 | 97,1 | 117,3 | **109,5 ± 10,9** |
| **Don sonrası kütle kaybı (76 çevrim) (%)** *Decreasing of weight after freeze-thaw (76 Cycle)* | TS EN 12371 | 5 | 0,103 | 0,256 | **0,203 ± 0,086** |
| **Yoğun yük altında bükülme dayanımı (MPa)** *Flexural strength under concentrated load* | TS EN 12372 | 6 | 11,86 | 14,22 | **12,77 ± 0,75** |
| **Don sonrası yoğun yük altında bükülme dayanımı (12 çevrim) (MPa)** *Flexural strength under constant moment after freeze-thaw (12 Cycle)* | TS EN 12371 | 5 | 9,48 | 11,79 | **10,90 ± 0,82** |
| **Don sonrası yoğun yük altında bükülme dayanımı (48 çevrim) (MPa)** *Flexural strength under constant moment after freeze-thaw (48 Cycle)* | TS EN 12371 | 5 | 9,08 | 13,92 | **10,43 ± 2,34** |
| **Don sonrası yoğunyük altında bükülme dayanımı (76 çevrim) (MPa)** *Flexural strength under constant moment after freeze-thaw (76 Cycle)* | TS EN 12371 | 5 | 8,66 | 10,82 | **9,73 ± 1,08** |

| Özellik / *Property* | Standart *Standard* | Deney sayısı *Number of tests* | En küçük *Lowest* | En büyük *Highest* | Ortalama *Average* |
|---|---|---|---|---|---|
| **Basınç dayanımı (MPa)** *Compressive strength* | TS EN 1926 | 6 | 80,9 | 95,1 | **87,6 ± 6,3** |
| **Don sonrası basınç dayanımı (12 döngü) (MPa)** *Compressive strength after freeze-thaw (12 Cycle)* | TS EN 12371 | 5 | 69,8 | 89,6 | **81,1 ± 8,4** |
| **Don sonrası kütle kaybı (12 döngü) (%)** *Decreasing of weight after freeze-thaw (12 Cycle)* | TS EN 12371 | 5 | 0,008 | 0,030 | **0,017 ± 0,011** |
| **Don sonrası basınç dayanımı (48 döngü) (MPa)** *Compressive strength after freeze-thaw (48 Cycle)* | TS EN 12371 | 5 | 68,8 | 85,5 | **74,4 ± 7,7** |
| **Don sonrası kütle kaybı (48 döngü) (%)** *Decreasing of weight after freeze-thaw (48 Cycle)* | TS EN 12371 | 5 | 0,026 | 0,066 | **0,042 ± 0,021** |
| **Yoğun yük altında bükülme dayanımı (MPa)** *Flexural strength under concentrated load* | TS EN 12372 | 6 | 3,77 | 5,24 | **4,45** ± 0,56 |
| **Don sonrası yoğun yük altında bükülme dayanımı (12 döngü) (MPa)** *Flexural strength under constant moment after freeze-thaw (12 Cycle)* | TS EN 12371 | 5 | 3,04 | 3,24 | **3,16 ± 0,09** |
| **Don sonrası yoğun yük altında bükülme dayanımı (48 döngü) (MPa)** *Flexural strength under constant moment after freeze-thaw (48 Cycle)* | TS EN 12371 | 5 | 1,64 | 2,79 | **2,22** ± 0,82 |

LEYLAK plaka

# Analysis Report

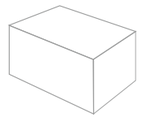
| Özellik / *Property* | Standart *Standard* | Deney sayısı *Number of tests* | En küçük *Lowest* | En büyük *Highest* | Ortalama *Average* |
|---|---|---|---|---|---|
| **Termal şok sonrası yoğun yük altında bükülme dayanımı (20 döngü) (MPa)** *Flexural strength under concentrated load after thermal shock (20 Cycle)* | TS EN 14066 | 6 | 12,4 | 17,2 | **15,3 ± 1,9** |
| **Termal şok sonrası kütle kaybı (-) (%)** *Decreasing of weight after thermal shock* | TS EN 14066 | 6 | 0,023 | 0,043 | **0,033 ± 0,007** |
| **Termal şok sonrası P-dalga hızı değişimi (-) (%)** *Changing of P-wave velocity after thermal shock* | TS EN 14066 | 6 | 1,05 | 11,02 | **4,71 ± 4,08** |
| **Su buharı direnç faktörü (kuru) (μ-değeri)** *Water vapour resistance factor (dry) (μ-value)* | TS EN 12524 | - | - | - | **10000** |
| **Isı iletkenliği - Isıl direnç (W/mK)** *Thermal conductivity - Thermal resistant) (λ)* | TS EN 12524 | - | - | - | **3,50** |
| **Kayma direnci (cilalı-kuru) (SRV)** *Slip resistance (polished-dry)* | TS EN 14231 | 5 | 32,4 | 33,3 | **32,9 ± 0,5** |
| **Kayma direnci (cilalı-ıslak) (SRV)** *Slip resistance (polished-wet)* | TS EN 14231 | 5 | 7,1 | 9,2 | **8,1 ± 1,0** |

| **Kimyasal analiz / *Chemical analysis* (%)** | | | | | | | | **TS EN 15309** |
|---|---|---|---|---|---|---|---|---|
| CaO | MgO | $Fe_2O_3$ | $SiO_2$ | $Al_2O_3$ | $Na_2O$ | $K_2O$ | $SO_3$ | Kızdırma Kaybı / *LOI* |
| 50,21 | 4,76 | 0,03 | 0,12 | 0,08 | 0,01 | 0,01 | 0,03 | 44,62 |

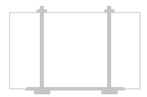
| Özellik / *Property* | Standart *Standard* | Deney sayısı *Number of tests* | En küçük *Lowest* | En büyük *Highest* | Ortalama *Average* |
|---|---|---|---|---|---|
| **Sertlik (Mohs)** *Hardness (Mohs)* | TS 6809 | 4 | 3,5 | 4,0 | **3,7 ± 0,3** |
| **Özgül ağırlık ($g/cm^3$)** *Specific gravity* | TS EN 1936 | 4 | 2,745 | 2,754 | **2,750 ± 0,005** |
| **Görünür yoğunluk ($g/cm^3$)** *Apparent density* | TS EN 1936 | 6 | 2,725 | 2,736 | **2,731 ± 0,004** |
| **Açık gözeneklilik (%)** *Open porosity* | TS EN 1936 | 6 | 0,212 | 0,296 | **0,251 ± 0,035** |
| **Atmosfer basıncında su emme tayini (%)** *Determination of water absorption at atmospheric pressure* | TS EN 13755 | 6 | 0,078 | 0,108 | **0,092 ± 0,013** |
| **Toplam gözeneklilik (%)** *Total porosity* | TS EN 1936 | - | - | - | **0,704** |
| **Kılcal etkiye bağlı su emme katsayısının tayini ($g/m^2.s^{0,5}$)** *Determination of water absorption coefficient by capillarity* | TS EN 1925 | 4 | 0,69 | 0,78 | **0,73 ± 0,05** |
| **Aşınma dayanımı (Metod-B/Böhme) ($cm^3/50cm^2$)** *Abrasion strength* | TS EN 14157 | 4 | 12,85 | 14,12 | **13,70 ± 0,73** |
| **P-dalga hızı (m/s)** *P-wave velocity* | TS EN 14579 | 6 | 6271 | 6457 | **6369 ± 87** |
| **Basınç dayanımı (MPa)** *Compressive strength* | TS EN 1926 | 6 | 65,3 | 93,8 | **82,9 ± 10,0** |
| **Don sonrası basınç dayanımı (14 döngü) (MPa)** *Compressive strength after freeze-thaw (14 Cycle)* | TS EN 12371 | 6 | 54,3 | 76,6 | **64,7 ± 8,3** |
| **Don sonrası kütle kaybı (-) (%)** *Decreasing of weight after freeze-thaw* | TS EN 12371 | 6 | 0,011 | 0,039 | **0,033 ± 0,010** |
| **Yoğun yük altında bükülme dayanımı (MPa)** *Flexural strength under concentrated load* | TS EN 12372 | 6 | 17,4 | 20,6 | **18,8 ± 1,1** |
| **Don sonrası yoğun yük altında bükülme dayanımı (14 döngü) (MPa)** *Flexural strength under constant moment after freeze-thaw (14 Cycle)* | TS EN 12371 | 6 | 11,4 | 15,2 | **13,9 ± 1,5** |
| **Dona karşı dayanım (-) (%)** *Frost resistance* | TS EN 12371 | - | | - | **26,0** |

# Olympos Beige Polished

Block

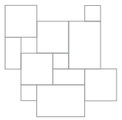


Slabs



2 cm Slabs
3 cm Slabs

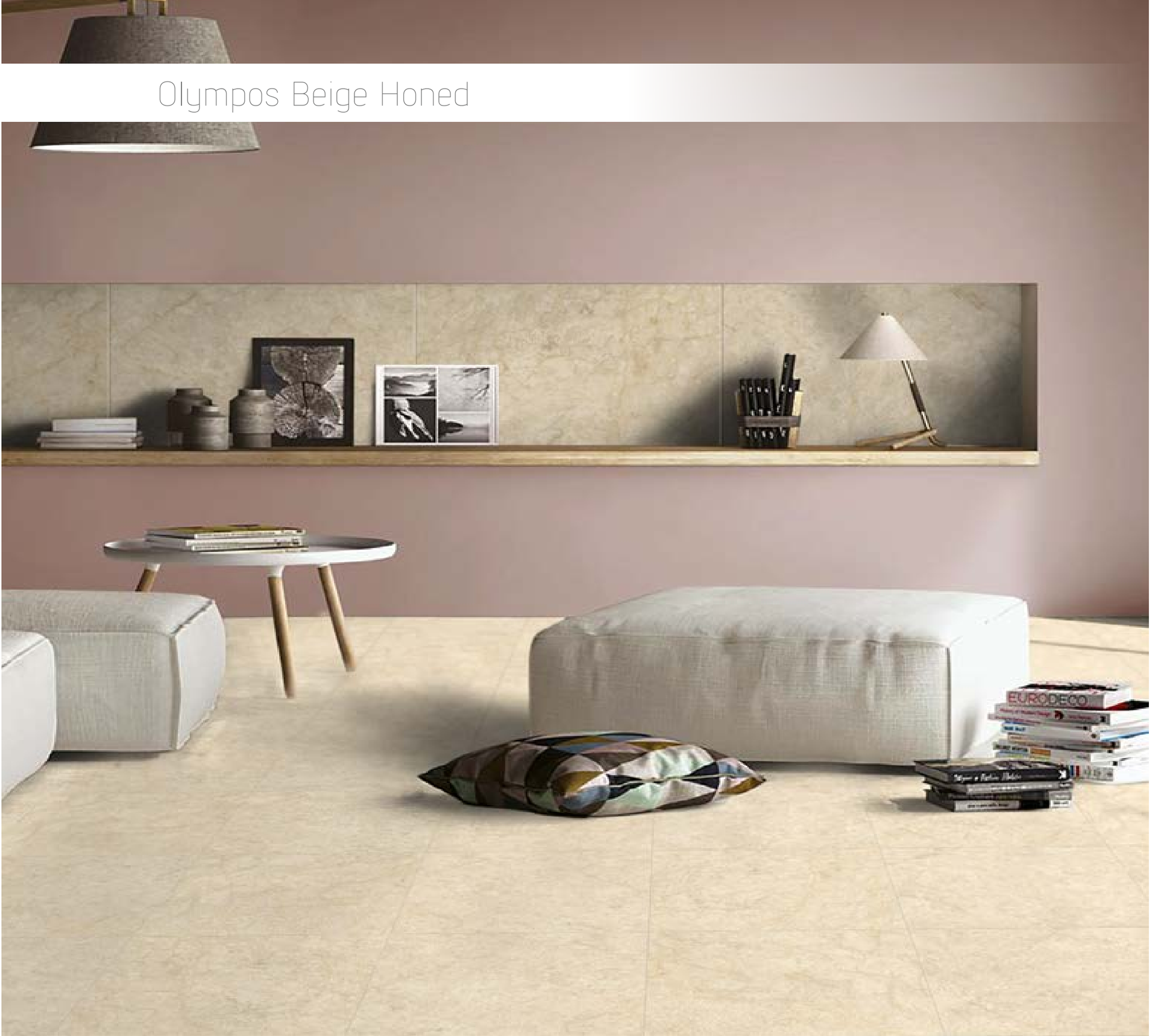
French Pattern Set



| Available Sizes | |
|---|---|
| 7,5 x 15 | 3'' x 6'' |
| 15 x 15 | 6'' x 6'' |
| 10 x 10 | 4'' x 4 '' |
| 10 x 30,5 | 4'' x 12'' |
| 15 x 30,5 | 6'' x 12 '' |
| 20,3 x 20,3 | 8'' x 8'' |
| 20,3 x 40,6 | 8'' x 16'' |
| 40,6 x 40,6 | 16''x 16'' |
| 40,6 x 61 | 16''x 24'' |
| 40,6 x 81,2 | 16''x 32'' |
| 45,7 x 45,7 | 18''x 18'' |
| 20,3 x 45,7 | 8'' x 18'' |
| 45,7 x 91,4 | 18''x 36'' |
| 30,5 x 30,5 | 12''x 12'' |
| 30,5 x 45,7 | 12''x18'' |
| 30,5 x 61 | 12'' x 24'' |
| 61 x 61 | 24'' x 24'' |
| 61 x 91,5 | 24'' x 36'' |
| FRENCH PATTERN SET | |
| MINI PATTERN SET | |

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | $cm^2/50\ cm^2$ | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Olympos Beige Honed

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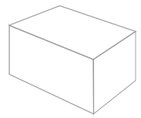
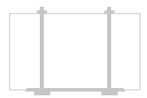
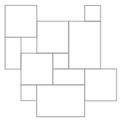


Slabs



2 cm Slabs
3 cm Slabs

French Pattern Set



| Available Sizes | |
|---|---|
| 7,5 x 15 | 3'' x 6'' |
| 15 x 15 | 6'' x 6'' |
| 10 x 10 | 4'' x 4 '' |
| 10 x 30,5 | 4'' x 12'' |
| 15 x 30,5 | 6'' x 12 '' |
| 20,3 x 20,3 | 8'' x 8'' |
| 20,3 x 40,6 | 8'' x 16'' |
| 40,6 x 40,6 | 16''x 16'' |
| 40,6 x 61 | 16''x 24'' |
| 40,6 x 81,2 | 16''x 32'' |
| 45,7 x 45,7 | 18''x 18'' |
| 20,3 x 45,7 | 8'' x 18'' |
| 45,7 x 91,4 | 18''x 36'' |
| 30,5 x 30,5 | 12''x 12'' |
| 30,5 x 45,7 | 12''x18'' |
| 30,5 x 61 | 12'' x 24'' |
| 61 x 61 | 24'' x 24'' |
| 61 x 91,5 | 24'' x 36'' |
| FRENCH PATTERN SET | |
| MINI PATTERN SET | |

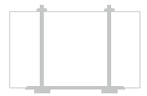
| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | $cm^2/50\ cm^2$ | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Olympos Beige Brushed

Block

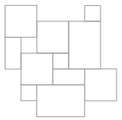


Slabs



2 cm Slabs
3 cm Slabs

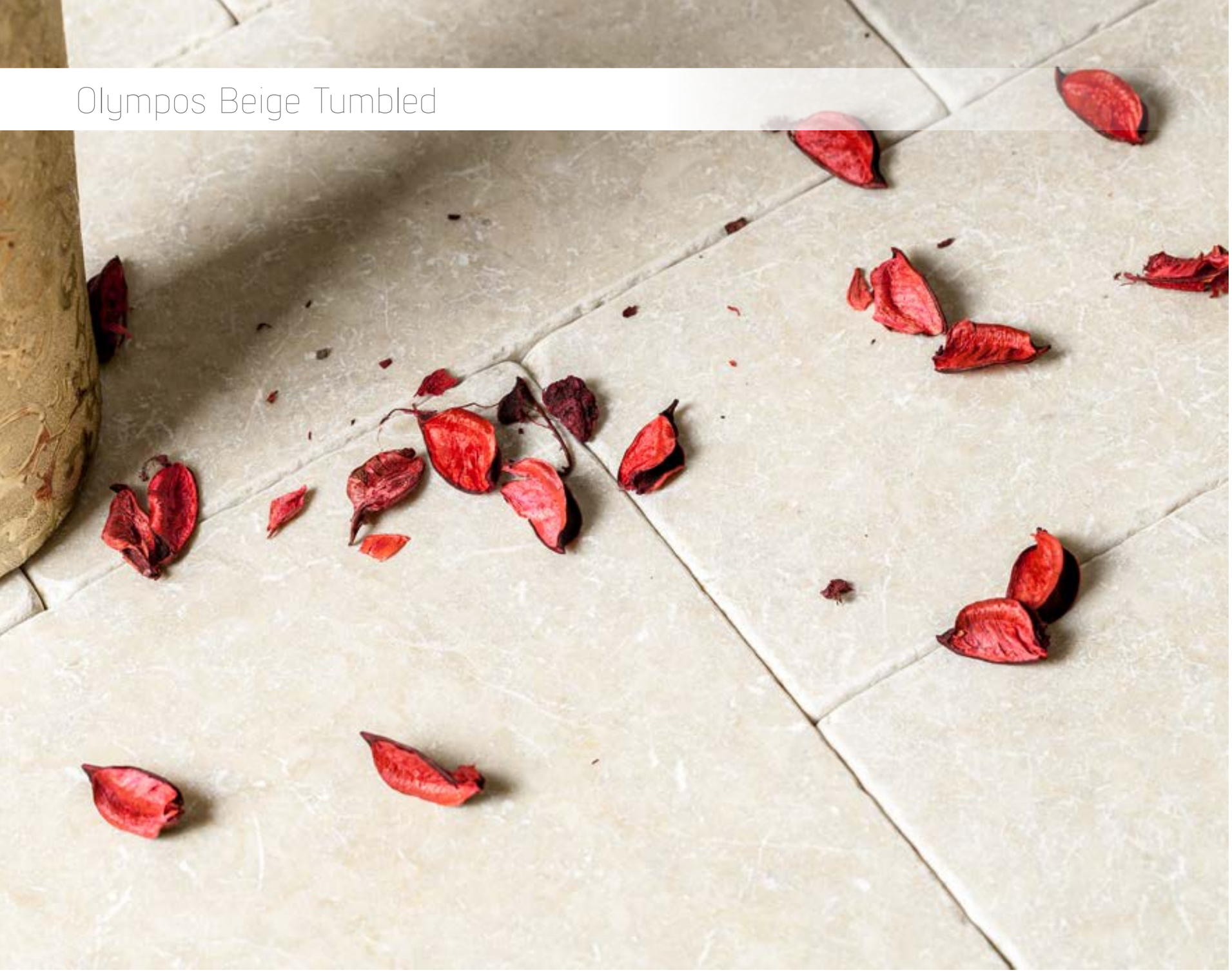
French Pattern Set



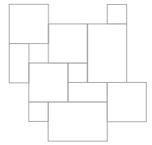
| Available Sizes | |
|---|---|
| 7,5 x 15 | 3'' x 6'' |
| 15 x 15 | 6'' x 6'' |
| 10 x 10 | 4'' x 4 '' |
| 10 x 30,5 | 4'' x 12'' |
| 15 x 30,5 | 6'' x 12 '' |
| 20,3 x 20,3 | 8'' x 8'' |
| 20,3 x 40,6 | 8'' x 16'' |
| 40,6 x 40,6 | 16''x 16'' |
| 40,6 x 61 | 16''x 24'' |
| 40,6 x 81,2 | 16''x 32'' |
| 45,7 x 45,7 | 18''x 18'' |
| 20,3 x 45,7 | 8'' x 18'' |
| 45,7 x 91,4 | 18''x 36'' |
| 30,5 x 30,5 | 12''x 12'' |
| 30,5 x 45,7 | 12''x18'' |
| 30,5 x 61 | 12'' x 24'' |
| 61 x 61 | 24'' x 24'' |
| 61 x 91,5 | 24'' x 36'' |
| FRENCH PATTERN SET | |
| MINI PATTERN SET | |

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | $cm^2/50\ cm^2$ | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Olympos Beige Tumbled



French Pattern Set



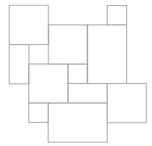
| Available Sizes | |
|---|---|
| 7,5 x 15 | 3 '' x 6 '' |
| 15 x 15 | 6 '' x 6 '' |
| 10 x 10 | 4 '' x 4 '' |
| 20,3 x 20,3 | 8'' x 8'' |
| 40,6 x 40,6 | 16'' x 16'' |
| 40,6 x 61 | 16'' x 24'' |
| 45,7 x 45,7 | 18'' x 18'' |
| 30,5 x 30,5 | 12'' x 12'' |
| 15,25 x 30,5 | 6'' x 12'' |
| 61 x 61 | 24'' x 24'' |
| 61 x 91,5 | 24'' x 36'' |
| FRENCH PATTERN SET | |
| MINI PATTERN SET | |

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | $cm^2/50\ cm^2$ | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Olympos Beige Sand-Blasted



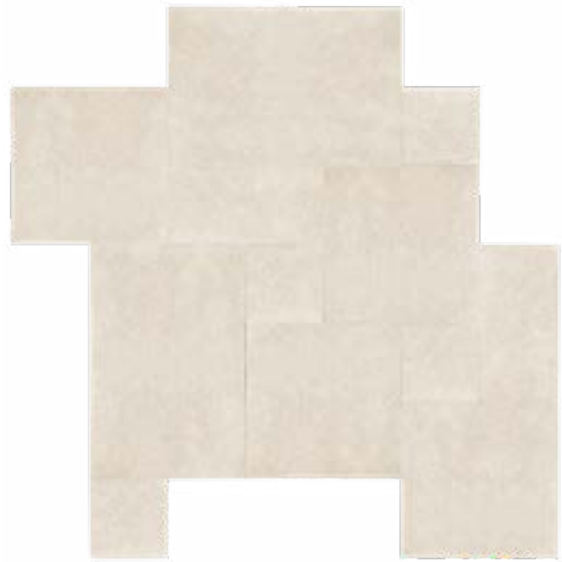
French Pattern Set



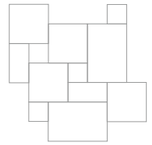
| Available Sizes | |
|---|---|
| 7,5 x 15 | 3 '' x 6 '' |
| 15 x 15 | 6 '' x 6 '' |
| 10 x 10 | 4 '' x 4 '' |
| 20,3 x 20,3 | 8'' x 8'' |
| 40,6 x 40,6 | 16'' x 16'' |
| 30,5 x 61 | 12'' x 24'' |
| 40,6 x 61 | 16'' x 24'' |
| 45,7 x 45,7 | 18'' x 18'' |
| 30,5 x 30,5 | 12'' x 12'' |
| 15,25 x 30,5 | 6'' x 12'' |
| 15,25 x 15,25 | 6'' x 6'' |
| 61 x 61 | 24'' x 24'' |
| FRENCH PATTERN SET | |
| MINI PATTERN SET | |

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | $cm^2/50\ cm^2$ | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Olympos Beige Sand-Blasted & Brushed



French Pattern Set



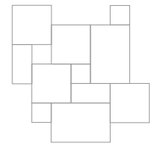
| Available Sizes | |
|---|---|
| 7,5 x 15 | 3 '' x 6 '' |
| 15 x 15 | 6 '' x 6 '' |
| 10 x 10 | 4 '' x 4 '' |
| 20,3 x 20,3 | 8'' x 8'' |
| 40,6 x 40,6 | 16'' x 16'' |
| 30,5 x 61 | 12'' x 24'' |
| 40,6 x 61 | 16'' x 24'' |
| 45,7 x 45,7 | 18'' x 18'' |
| 30,5 x 30,5 | 12'' x 12'' |
| 15,25 x 30,5 | 6'' x 12'' |
| 15,25 x 15,25 | 6'' x 6'' |
| 61 x 61 | 24'' x 24'' |
| FRENCH PATTERN SET | |
| MINI PATTERN SET | |

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | $cm^2/50\ cm^2$ | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Olympos Beige Bush Hammered



French Pattern Set



| Available Sizes | |
|---|---|
| 7,5 x 15 | 3 '' x 6 '' |
| 15 x 15 | 6 '' x 6 '' |
| 10 x 10 | 4 '' x 4 '' |
| 20,3 x 20,3 | 8'' x 8'' |
| 40,6 x 40,6 | 16'' x 16'' |
| 30,5 x 61 | 12'' x 24'' |
| 40,6 x 61 | 16'' x 24'' |
| 45,7 x 45,7 | 18'' x 18'' |
| 30,5 x 30,5 | 12'' x 12'' |
| 15,25 x 30,5 | 6'' x 12'' |
| 15,25 x 15,25 | 6'' x 6'' |
| 61 x 61 | 24'' x 24'' |
| FRENCH PATTERN SET | |
| MINI PATTERN SET | |

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | cm²/50 cm² | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

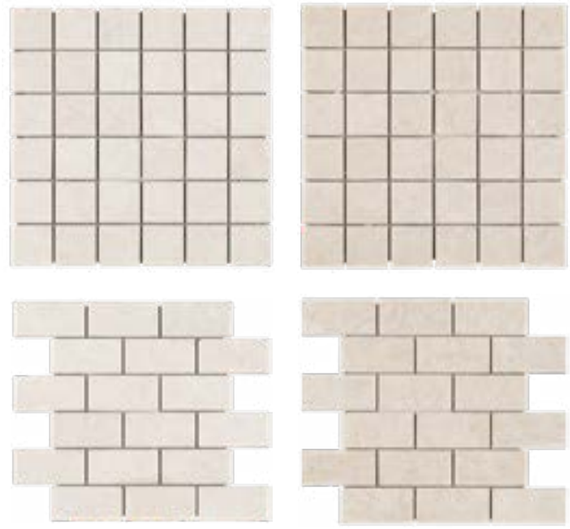
# Olympos Beige Splitface Mosaic

## Available Sizes

| | |
|---|---|
| 1″ x 1″ | 2,3 x 2,3 |
| 1″ x 2″ | 2,3 x 4,8 |
| 2″ x 2″ | 4,8 x 4,8 |
| 2″ x 4″ | 4,8 x 9,6 |

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | cm²/50 cm² | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Olympos Beige Polished Mosaic



## Available Sizes

| | |
|---|---|
| 1″ x 1″ | 2,3 x 2,3 |
| 1″ x 2″ | 2,3 x 4,8 |
| 1″ x 3″ | 2,3 x 9,6 |
| 2″ x 2″ | 4,8 x 4,8 |
| 2″ x 4″ | 4,8 x 9,6 |

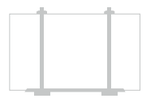
Mini Versailles Set
Herringbone
Hexagon
Random Linear
Basket Weave

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | $cm^2/50\ cm^2$ | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Silver Shadow Polished

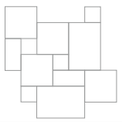
Block

Slabs



2 cm Slabs
3 cm Slabs

French Pattern Set



| Available Sizes | |
|---|---|
| 7,5 x 15 | 3''x 6'' |
| 15 x 15 | 6 ''x 6'' |
| 10 x 10 | 4''x 4'' |
| 10 x 30,5 | 4''x12'' |
| 15 x 30,5 | 6'' x 12 '' |
| 20,3 x 20,3 | 8''x 8'' |
| 20,3 x 40,6 | 8''x 16'' |
| 40,6 x 40,6 | 16'' x 16'' |
| 40,6 x 61 | 16'' x 24'' |
| 40,6 x 81,2 | 16'' x 32'' |
| 45,7 x 45,7 | 18'' x 18'' |
| 20,3 x 45,7 | 8'' x 18'' |
| 45,7 x 91,4 | 18'' x 36'' |
| 30,5 x 30,5 | 12'' x 12'' |
| 30,5 x 45,7 | 12'' x18'' |
| 30,5 x 61 | 12'' x 24'' |
| 61 x 61 | 24'' x 24'' |
| 61 x 91,5 | 24'' x 36'' |
| FRENCH PATTERN SET | |
| MINI PATTERN SET | |

| Physical And Mechanical Properties | | | | | |
|---|---|---|---|---|---|
| | Metric System | | SI System | | Standard |
| Density | gr/cm³ | 2.838±0,01 | kg/m³ | 2.838±10 | TS EN 1936 |
| Real Porosity | % | 4,11 | % | 4,11 | TS EN 1936 |
| Water Absorption Coefficient by Capillarity | g/m².s$^{0,5}$ | 7,29±1,3 | g/m².s$^{0,5}$ | 7,29±1,3 | TS EN 1925 |
| Compressive Strength | Kg/cm² | 953±151 | Mpa | 93,4±14,8 | TS EN 1926 |
| Compressive Strength after Freeze-thaw (12cyc.) | Kg/cm² | 787±121 | Mpa | 77,2±11,8 | TS EN 12371 |
| Hardness | Mohs | 3 - 3,5 | Mohs | 3 - 3,5 | TS 6809 |
| Water Vapour Resistance Factor (dry) | µ-değeri | 283 | µ-değeri | 283 | TS EN 12524 |
| Thermal Conductivity (k) | W/m.K | 2,57 | W/m.K | 2,57 | TS EN 12524 |
| Abrasion Strength (Method-B/Bohme) | cm³/50cm² | 10,41±1,5 | cm³/50cm² | 10,41±1,5 | TS EN 14157 |
| P-Wave Velocity | m/s | 5561±214 | m/s | 5561±214 | TS EN 14579 |

# OUTDOORS

# Wall Stones

# Split Face

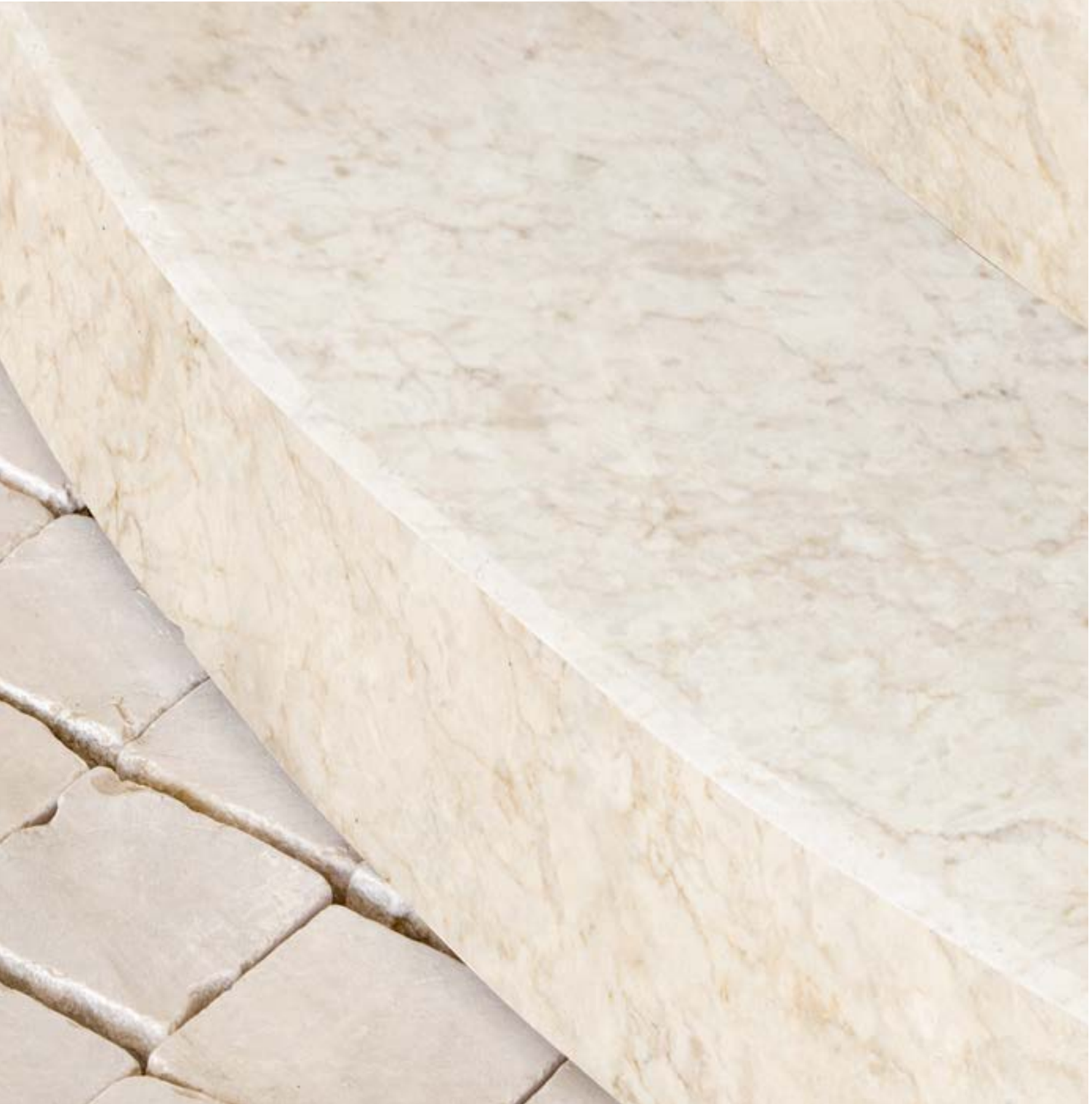


## Available Sizes

7,5 x 18 x 20-50 cm
15 x 18 x 20-50 cm
22,5 x 18 x 20-50 cm

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | cm²/50 cm² | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Block Step



# Block Step

## Available Sizes

15 x 35 x 100 cm
15 x 35 x 120 cm
15 x 35 x 150 cm

| Properties | Unit | Value | Test Method |
|---|---|---|---|
| Moh's Hardness Index | - | 3-4 | TS 6809 |
| Apparent Density | kg/m³ | 2700±3 | TS EN 1936 |
| Real Density | kg/m³ | 2720±16 | TS EN 1936 |
| Water absorption at atmospheric | % | 0,15±0,03 | TS EN 13755 |
| Open Porosity | % | 0,41±0,07 | TS EN 1936 |
| Total Porosity | % | 0,74 | TS EN 1936 |
| Ratio of Fullness | % | 99,26 | TS 699 |
| Flexural Strength Under Constant | MPa | 12,41±1,29 | TS EN 13161 |
| Flexural Strength Under Concentrated | MPa | 11,64±1,02 | TS EN12372 |
| Uniaxial Compressive Strength | MPa | 131±16 | TS EN 1926 |
| Abrasion Resistance (Method B-Bohme) | $cm^2/50\ cm^2$ | 7,93±0,53 | TS EN 14157 |
| Impact Resistance | MPa | 0,69±0,36 | TS 699 |
| P- Wave Velocity | km/s | 6,353±0,075 | TS EN 14579 |

# Outdoor Collections

## Cube

**Available Sizes**
7,5-8 x 10 x 10 cm

## Kerb

**Available Sizes**
15 x 20 x 30 - 40 -50 - 60
15 x 25 x 30 - 40 -50 - 60

## Corner Stone

**Available Sizes**
5 x 5 x 20 cm
10 x 10 x 20 cm
15 x 15 x 20 cm

# Wall Coping

Available Sizes

5 x 26 x 50-100 cm
5 x 30 x 50-100 cm
6 x 26 x 50-100 cm
6 x 30 x 50-100 cm

Wall Coping

# Pool Coping

Available Sizes

3 x 30 x 45-60-100-120 cm
3 x 35 x 45-60-100-120 cm

Pool Coping

**TEST / ANALİZLER**
Test / Analysis
*Tuz buharıyla yıpranmaya karşı direncin tayini
(Determination of resistance to ageing by salt mist)

**TEST / ANALİZ METODU**
Test / Analysis Method
TS EN 14147

| Test No | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 |
|---|---|---|---|---|---|---|
| **Numune Boyutu(mm)** (Sample Size) | 200x200x20 | 200x200x20 | 200x200x20 | 200x200x20 | 200x200x20 | 200x200x20 |
| **Kütle Kaybı (%)** (Loss in Mass) | -0,02 | 0,03 | 0,03 | 0,02 | 0,01 | 0,06 |
| **Ortalama Sonuç (%)** (Avarage Result) | 0,02 | | | | | |
| **Standart Sapma** (Standard Deviation) | 0,03 | | | | | |
| **Oksitlenme** (Oxidation) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Renk Değişimi** (Discoloration) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Beneklerin Görünümü** (Appearance of Spots) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Kırık Çatlak Durumu** (Status of the Crack) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Pullanma veya Eksfolyasyon** (Exfoliation) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Şişme-Kabarma** (Swelling and Blistering) | Yok | Yok | Yok | Yok | Yok | Yok |

**TEST / ANALİZLER**
Test / Analysis
*Don tesirlerine dayanıklılık ve don sonrası basınç dayanımı deneyi (48 döngü)
(Determination of frost resistance)(48 Cycle)

**TEST / ANALİZ METODU**
Test / Analysis Method
TS EN 12371
(Madde7.3.1.1 ve Madde7.3.1.2)

| Test No | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 | Test 7 | Test 8 | Test 9 | Test 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Numune Boyutu(mm)** (Sample Size) | 50,8x50,5 | 50,8x50,3 | 50,5x50,5 | 50,5x50,3 | 50,3x50,4 | 50,5x50,8 | 50,8x50,2 | 50,8x50,4 | 50,5x50,5 | 50,3x50,5 |
| **Kırılma Yükü (kN)** (Breaking Load) | 335,71 | 482,89 | 363,14 | 380,71 | 260,10 | 323,52 | 338,76 | 334,99 | 248,17 | 310,79 |
| **Sonuç (MPa)** (Result) | 134 | 193 | 145 | 152 | 104 | 129 | 136 | 134 | 99 | 124 |
| **Ortalama Değer (MPa)** (Average Value) | 135 | | | | | | | | | |
| **Standart Sapma** (Standard Deviation) | 26 | | | | | | | | | |
| **Kütle Kaybı (%)** (Loss in Mass) | 0,02 | 0,04 | 0,01 | 0,05 | 0,06 | 0,01 | 0,03 | 0,02 | 0,04 | 0,01 |
| **Kütle Kaybı Ortalama Değer (%)** (Average Value of Loss in Mass) | 0,03 | | | | | | | | | |

**TEST / ANALİZLER**
Test / Analysis
*Tuz kristallenmesine direncin tayini
(Determination of resistance to salt crystallization)

**TEST / ANALİZ METODU**
Test / Analysis Method
TS EN 12370

| Test No | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 |
|---|---|---|---|---|---|---|
| **Numune Boyutu(mm)** (Sample Size) | 40x40x40 | 40x40x40 | 40x40x40 | 40x40x40 | 40x40x40 | 40x40x40 |
| **Sonuç (%)** (Result) | 0,015 | -0,041 | -0,026 | -0,035 | -0,025 | 0,037 |
| **Ortalama Değer (%)** (Average Value) | -0,012 | | | | | |
| **Standart Sapma** (Standard Deviation) | 0,031 | | | | | |

CE

# *Performans Beyannamesi*

**NO: OZL-CE05**

**Ürün tipi:**
Kaplama amaçlı kullanılan doğal taş plakaları.(TS EN 1469)

**Tür, parti veya seri numarası:**
Olympos Bej / OZL-CE05

**Ürünün Kullanım Amacı:**
İç/Dış cephe duvar ve tabanlarında kaplama amaçlı kullanılır

**Üreticinin adı, üretim adresi, iletişim bilgileri:**

**Üreticinin Adı:** ÖZELLER MADENCİLİK NAKLİYAT SANAYİ VE TİCARET LTD. ŞTİ.

**Üreticinin Adresi:** ÇAMLICA MAH. 1763 SOK. NO:3 BUCAK / BURDUR / TÜRKİYE

**İletişim Bilgileri:**

**Tel:** + 90 (248) 317 12 80 **Fax:** + 90 (248) 317 12 84

**Web:** www.ozellermarble.com

***Performans Değişmezlik Sistemi:***
**Sistem 4**

**Performans Beyanı**

**OZL-CE05**
**TS EN 1469**
**Olympos Bej**

| | | |
|---|---|---|
| Moh's Sertlik İndeksi | 3-4 | - |
| Görünür Yoğunluk | 2700 ± 3 | kg/m³ |
| Gerçek Yoğunluk | 2720 ± 16 | kg/m³ |
| Atmosfer Basıncında Su Emme | 0,15 ± 0,03 | % |
| Açık Gözeneklilik | 0,41 ± 0,07 | % |
| Toplam Gözeneklilik | 0,74 | % |
| Doluluk Oranı | 99,26 | % |
| Sabit Moment Altında Eğilme | 12,41 ± 1,29 | MPa |
| Yoğun Yük Altında Bükülme Dayanımı | 11,64 ± 1,02 | MPa |
| Tek Eksenli Basınç Dayanımı | 131 ± 16 | MPa |
| Aşınma Direnci (Metot B-Böhme) | 7,93 ± 0,53 | cm³/50 cm² |
| Darbe Dayanımı | 0,69 ± 0,36 | MPa |
| P-Dalga Hızı | 6,353 ± 0,075 | km/s |

T.C.
TÜRK PATENT ENSTİTÜSÜ

# MARKA TESCİL BELGESİ

**Marka No : 2011 13632 - Ticaret**

Özeller marble

**Marka Sahibi :ÖZELLER MADENCİLİK NAK.SAN VE TİC.LTD. ŞTİ.**
**TÜRKİYE CUMHURİYETİ**
**Çamlıca Mh.1763 Sk. No: 3 bucak BURDUR**
**Emtiası : 19**
**İlişiktedir.**

**Markaların Korunması Hakkında 556 Sayılı Kanun Hükmünde Kararnameye göre 21/02/2011 tarihinden itibaren ON YIL müddetle 02/08/2012 tarihinde tescil edilmiştir.**

**Elif B. AKIN**
**Enstitü Başkanı a.**
**Markalar Dairesi Başkanı**

TÜRK PATENT [●] ENSTİTÜSÜ

UDEM

# CERTIFICATE

**57906**

This certificate was given to the below stated company by UDEM International Certification Audit Training Cent. Ind. Inc. Co.

## Özeller Madencilik Nakliyat Sanayi ve Ticaret Limited Şirketi

Çamlıca Mahallesi 1763 Sokak No:3 Bucak
BURDUR / TURKEY

# ISO 9001:2008

Scope: Production and sales of marble
EA Code: 15

| | |
|---|---|
| Certification Audit Date | : 19.08.2015 |
| Decision Date | : 24.08.2015 |
| Reissue Date | : 06.09.2017 |
| Expiry Date | : 23.08.2018 |

UDEM APPROVE

UDEM International Certification
Audit Training Cent. Ind. Inc. Co.

UDEM JAS-ANZ

Hereby, UDEM International Certification Audit Training Cent. Ind. Inc. Co. certifies that the above stated company have the appropriate management system according to the requirements of the above standard. This certificate is valid for 3 years since the decision date as long as the system is effectively maintained and surveillance audits are carried out. The validity of the certificate can be checked through www.udem.com.tr, www.jas-anz.org/register. The certificate is the property of UDEM International Certification Audit Training Cent. Ind. Inc. Co. and shall be returned if requested.

**Address:** Mutlukent Mahallesi 2073 Sokak (Eski 93 Sokak) No:10 Çankaya – Ankara - TURKEY
**Tel:** +90 312 443 03 90 (pbx) **Fax:** +90 312 443 03 76
**E-mail:** info@udemltd.com.tr **Web:** www.udem.com.tr

# Analysis Report

**TEST / ANALİZLER**
*Test / Analysis*

**TEST / ANALİZ METODU**
*Test / Analysis Method*

*Tuz kristallenmesine direncin tayini
*(Determination of resistance to salt crystallization)*

TS EN 12370

| Test No | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 |
|---|---|---|---|---|---|---|
| **Numune Boyutu (mm)** *(Sample Size)* | 40x40x40 | 40x40x40 | 40x40x40 | 40x40x40 | 40x40x40 | 40x40x40 |
| **Sonuç (%)** *(Result)* | 0,015 | -0,041 | -0,026 | -0,035 | -0,025 | 0,037 |
| **Ortalama Değer (%)** *(Average Value)* | -0,012 | | | | | |
| **Standart Sapma** *(Standard Deviation)* | 0,031 | | | | | |

**Bu raporda ( * ) şeklinde işaretlenmiş muayene sonuçları TÜRKAK tarafından akreditedir.**
*In this report (*) marked test / analysis results accredited by Turkish Accreditation Agency (TURKAK)*

Analiz Sorumlusu
*Responsible of Analysis*

Tekniker Ali ÇAKIR

**Çevre Şartları** / *Environmental Conditions*
Sıcaklık / *Temperature, °C* : 23,3
Rutubet / *Moisture,* % : 33,0

Sonuçlar, sadece deneyi yapılan numuneye aittir.
*The results belong to the tested sample only.*

**TEST / ANALİZLER**
*Test / Analysis*
*Tuz buharıyla yıpranmaya karşı direncin tayini
*(Determination of resistance to ageing by salt mist*

**TEST / ANALİZ METODU**
*Test / Analysis Method*
TS EN 14147

| Test No | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 |
|---|---|---|---|---|---|---|
| **Numune Boyutu (mm)** *(Sample Size)* | 200x200x20 | 200x200x20 | 200x200x20 | 200x200x20 | 200x200x20 | 200x200x20 |
| **Kütle Kaybı (%)** *(Loss in Mass)* | -0,02 | 0,03 | 0,03 | 0,02 | 0,01 | 0,06 |
| **Ortalama Sonuç (%)** *(Avarage Result)* | 0,02 | | | | | |
| **Standart Sapma** *(Standard Deviation)* | 0,03 | | | | | |
| **Oksitlenme** (Oxidation) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Renk Değişimi** (Discoloration) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Beneklerin Görünümü** (Appearance of Spots) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Kırık Çatlak Durumu** (Status of the Crack) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Pullanma veya Eksfolyasyon** (Exfoliation) | Yok | Yok | Yok | Yok | Yok | Yok |
| **Şişme-Kabarma** (Swelling and Blistering) | Yok | Yok | Yok | Yok | Yok | Yok |

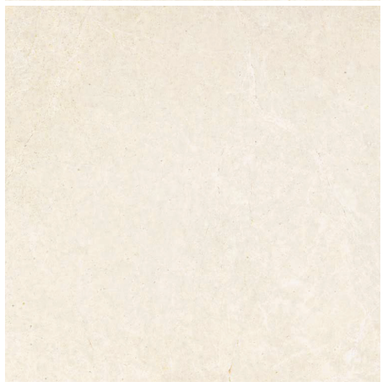
**TEST / ANALİZLER**
*Test / Analysis*
*Don tesirlerine dayanıklılık ve don sonrası basınç dayanımı deneyi (48 döngü)
*(Determination of frost resistance)(48 Cycle)*

**TEST / ANALİZ METODU**
*Test / Analysis Method*
TS EN 12371
(Madde7.3.1.1 ve Madde7.3.1.2)

| Test No | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 | Test 7 | Test 8 | Test 9 | Test 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Numune Boyutu (mm)** *(Sample Size)* | 50,8x50,5 | 50,8x50,3 | 50,5x50,5 | 50,5x50,3 | 50,3x50,4 | 50,5x50,8 | 50,8x50,2 | 50,8x50,4 | 50,5x50,5 | 50,3x50,5 |
| **Kırılma Yükü (kN)** *(Breaking Load)* | 335,71 | 482,89 | 363,14 | 380,71 | 260,10 | 323,52 | 338,76 | 334,99 | 248,17 | 310,79 |
| **Sonuç (MPa)** *(Result)* | 134 | 193 | 145 | 152 | 104 | 129 | 136 | 134 | 99 | 124 |
| **Ortalama Değer (MPa)** *(Average Value)* | 135 | | | | | | | | | |
| **Standart Sapma** *(Standard Deviation)* | 26 | | | | | | | | | |
| **Kütle Kaybı (%)** *(Loss in Mass)* | 0,02 | 0,04 | 0,01 | 0,05 | 0,06 | 0,01 | 0,03 | 0,02 | 0,04 | 0,01 |
| **Kütle Kaybı Ortalama Değer (%)** *(Average Value of Loss in Mass)* | 0,03 | | | | | | | | | |







# Vailla Beige Deluxe Selection

## AVALIABLE SIZES

| | |
|---|---|
| 1,2 x 30,5 x 61 cm | 2 x 30 x 60 cm |
| 1,2 x 61 x 61 cm | 2 x 60 x 60 cm |
| 1,2 x 45,7 x 91,4 cm | 2 x 60 x 120 cm |
| | 2 x 80 x 80 cm |
| 2x Slabs | 2 x 91,4 x 91,4 cm |
| 3x Slabs | 2 x 100 x 100 cm |

## AVALIABLE FINISH

Polished

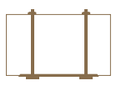
Honed

Brushed

Sandblasted

BLOCK

SLABS



TILES

# Vailla Beige Deluxe Application

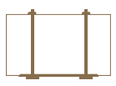
# Vailla Beige First Selection

## AVALIABLE SIZES

| | |
|---|---|
| 1,2 x 30,5 x 61 cm | 2 x 30 x 60 cm |
| 1,2 x 61 x 61 cm | 2 x 60 x 60 cm |
| 1,2 x 45,7 x 91,4 cm | 2 x 60 x 120 cm |
| | 2 x 80 x 80 cm |
| 2x Slabs | 2 x 91,4 x 91,4 cm |
| 3x Slabs | 2 x 100 x 100 cm |

BLOCK

SLABS



TILES

## AVALIABLE FINISH

Polished

Honed

Brushed

Sandblasted

# Vailla Beige First Application

## Vailla Beige Harmony Selection

### AVALIABLE SIZES

| | |
|---|---|
| 1,2 x 30,5 x 61 cm | 2 x 30 x 60 cm |
| 1,2 x 61 x 61 cm | 2 x 60 x 60 cm |
| 1,2 x 45,7 x 91,4 cm | 2 x 60 x 120 cm |
| | 2 x 80 x 80 cm |
| 2x Slabs | 2 x 91,4 x 91,4 cm |
| 3x Slabs | 2 x 100 x 100 cm |

BLOCK

SLABS

TILES

### AVALIABLE FINISH

Polished

Honed

Brushed

Sandblasted

## Vailla Beige Harmony Application

## Vailla Beige Arizona Selection

### AVALIABLE SIZES

| | |
|---|---|
| 1,2 x 30,5 x 61 cm | 2 x 30 x 60 cm |
| 1,2 x 61 x 61 cm | 2 x 60 x 60 cm |
| 1,2 x 45,7 x 91,4 cm | 2 x 60 x 120 cm |
| | 2 x 80 x 80 cm |
| 2x Slabs | 2 x 91,4 x 91,4 cm |
| 3x Slabs | 2 x 100 x 100 cm |

### AVALIABLE FINISH

Polished

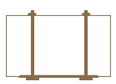
Honed

Brushed

Sandblasted

BLOCK

SLABS



TILES

## Vailla Beige Arizona Application

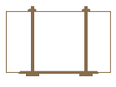
# Vailla Beige Flora Selection

## AVALIABLE SIZES

| | |
|---|---|
| 1,2 x 30,5 x 61 cm | 2 x 30 x 60 cm |
| 1,2 x 61 x 61 cm | 2 x 60 x 60 cm |
| 1,2 x 45,7 x 91,4 cm | 2 x 60 x 120 cm |
| | 2 x 80 x 80 cm |
| 2x Slabs | 2 x 91,4 x 91,4 cm |
| 3x Slabs | 2 x 100 x 100 cm |

BLOCK

SLABS



TILES

## AVALIABLE FINISH

Polished

Honed

Brushed

Sandblasted

# Vailla Beige Flora Application

# Moon Cream Light Application

## Moon Cream Light Selection

### AVALIABLE SIZES

1,2 x 30,5 x 61 cm
1,2 x 61 x 61 cm

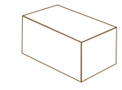
2 x 30 x 60 cm
2 x 60 x 60 cm
2 x 80 x 80 cm

2x Slabs
3x Slabs

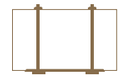
### AVALIABLE FINISH

Polished
Honed
Brushed
Sandblasted

BLOCK

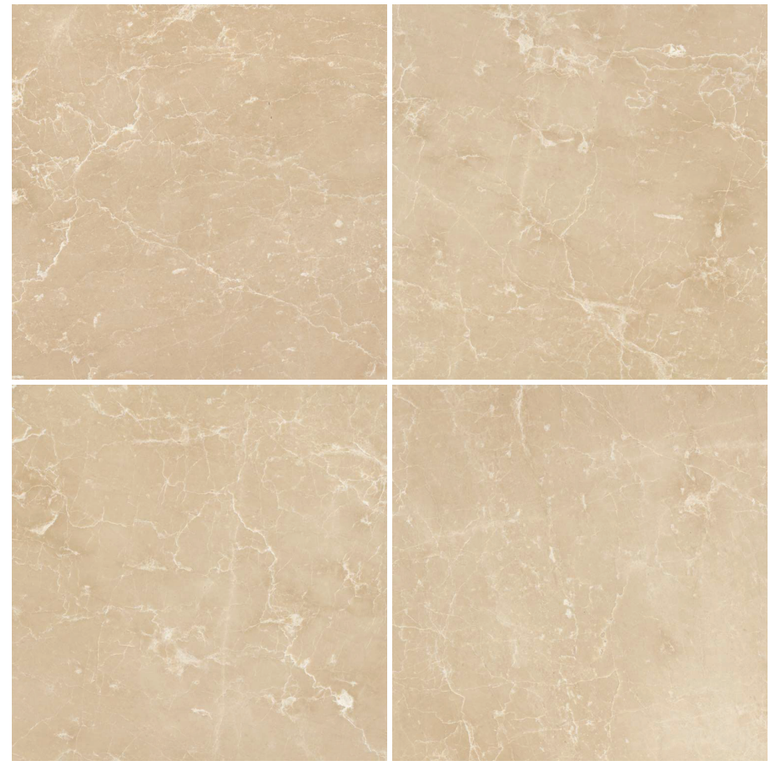


SLABS



TILES

# Moon Cream Medium Application



# Moon Cream Medium Selection

## AVALIABLE SIZES

1,2 x 30,5 x 61 cm

1,2 x 61 x 61 cm

2 x 30 x 60 cm

2 x 60 x 60 cm

2 x 80 x 80 cm

2x Slabs

3x Slabs

BLOCK

SLABS

TILES

## AVALIABLE FINISH

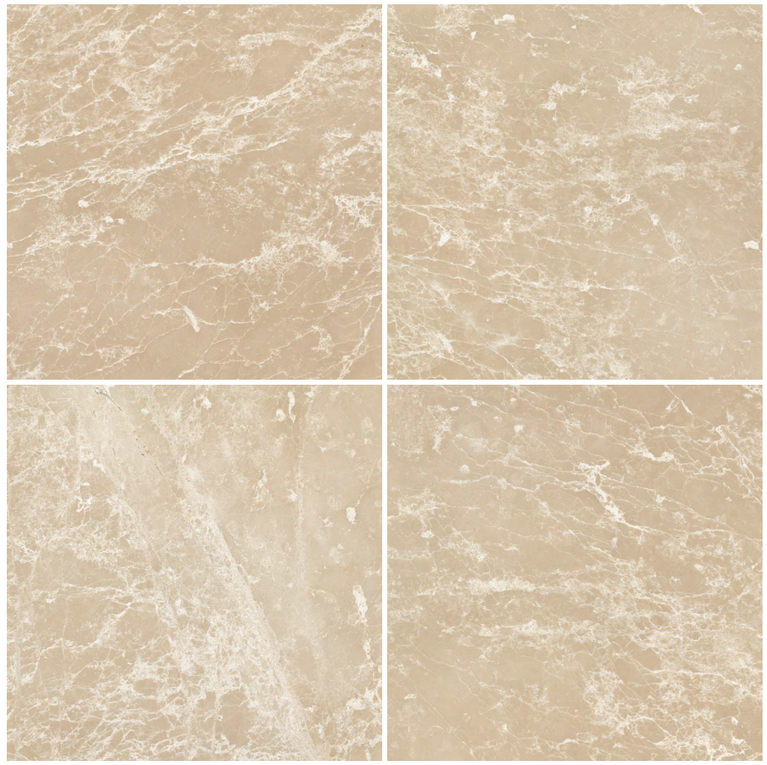
Polished

Honed

Brushed

Sandblasted

# Moon Cream Spider Application



## Moon Cream Spider Selection

### AVALIABLE SIZES

1,2 x 30,5 x 61 cm

1,2 x 61 x 61 cm

2 x 30 x 60 cm

2 x 60 x 60 cm

2 x 80 x 80 cm

2x Slabs

3x Slabs

### AVALIABLE FINISH

Polished

Honed

Brushed

Sandblasted

BLOCK

SLABS

TILES

# Moon Cream Natural Application


## Moon Cream Natural Selection

### AVALIABLE SIZES

1,2 x 30,5 x 61 cm
1,2 x 61 x 61 cm
2 x 30 x 60 cm
2 x 60 x 60 cm
2 x 80 x 80 cm
2x Slabs
3x Slabs

BLOCK

SLABS

### AVALIABLE FINISH

Polished
Honed
Brushed
Sandblasted

TILES

## Ivory Beige First Selection

### AVALIABLE SIZES

| | |
|---|---|
| 2x Slabs | 2 x 30 x 60 cm |
| 3x Slabs | 2 x 60 x 60 cm |
| | 2 x 80 x 80 cm |

### AVALIABLE FINISH

Polished

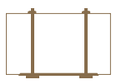
Honed

Brushed

Sandblasted

BLOCK

SLABS



TILES

## Ivory Beige First Application

# Ivory Beige Standart Application

# Ivory Beige Standart  Selection

## AVALIABLE SIZES

| | |
|---|---|
| 2x Slabs | 2 x 30 x 60 cm |
| 3x Slabs | 2 x 60 x 60 cm |
| | 2 x 80 x 80 cm |

## AVALIABLE FINISH

Polished

Honed

Brushed

Sandblasted

BLOCK

SLABS

TILES

# SHOWROOM

# Analysis Report

| Rock Name | White Emperador | | | Test By/Date | MB/15-10-19 | |
|---|---|---|---|---|---|---|
| Rock Type | Dolomitic marble | | | Checked/Date | MMc/15-10-19 | |
| Sandberg Sample Ref. | Oven Dried Mass in Air (g) | Density of Water (kg/m³) | Vacuum Saturated Mass in Air (g) | Vacuum Saturated Mass in Water (g) | Open Porosity (%) | Apparent Density (kg/m³) |
| G49237 a | 317.44 | 998 | 321.67 | 204.08 | 3.6 | 2690 |
| G49237 b | 320.53 | 998 | 324.16 | 205.92 | 3.1 | 2710 |
| G49237 c | 318.47 | 998 | 321.39 | 204.89 | 2.5 | 2730 |
| G49237 d | 314.56 | 998 | 317.37 | 201.87 | 2.4 | 2720 |
| G49237 e | 324.39 | 998 | 328.20 | 208.32 | 3.2 | 2700 |
| G49237 f | 331.07 | 998 | 334.43 | 212.64 | 2.8 | 2710 |
| Mean | | | | | 2.9 | 2710 |

| Rock Name | White Emperador | | | Test By/Date | HO/18-11-19 | |
|---|---|---|---|---|---|---|
| Rock Type | Dolomitic marble | | | Checked/Date | MB/18-11-19 | |
| Sandberg Sample Reference | Breaking Load (N) | Specimen Span (mm) | Specimen Width (mm) | Specimen Thickness (mm) | Flexural Strength (MPa) | Observations |
| G49240 a | 520 | 150 | 72.1 | 11.7 | 11.9 | Normal Failure |
| G49240 b | 440 | 150 | 73.2 | 12.3 | 8.9 | Normal Failure |
| G49240 c | Specimen split along vein during cutting and could not be tested | | | | | |
| G49240 d | 510 | 150 | 72.9 | 12.4 | 10.2 | Normal Failure |
| G49240 e | 670 | 150 | 73.6 | 12.1 | 14.0 | Normal Failure |
| G49240 f | 740 | 150 | 72.5 | 12.4 | 14.9 | Normal Failure |
| G49240 g | 750 | 150 | 71.5 | 11.9 | 16.7 | Normal Failure |
| G49240 h | 730 | 150 | 72.6 | 11.8 | 16.2 | Normal Failure |
| G49240 j | 780 | 150 | 72.8 | 11.7 | 17.6 | Normal Failure |
| G49240 k | 670 | 150 | 73.0 | 12.2 | 13.9 | Normal Failure |
| Mean | | | | | 13.8 | |
| Std. Dev. | | | | | 3.0 | |
| Var. Coef. | | | | | 0.2 | |

| Rock Name | White Emperador | | | Test By/Date | HO/18-11-19 | |
|---|---|---|---|---|---|---|
| Rock Type | Dolomitic marble | | | Checked/Date | MB/19-11-19 | |
| Sandberg Sample Ref. | Visual observations post 20 cycles | Initial mass (g) | Final mass (g) | Change in mass (%) | Initial dynamic elastic modulus (MPa) | Final dynamic elastic modulus (MPa) | Change in dynamic elastic modulus (%) |
| G49240 a | No changes in visual appearance or apparent material loss | 424.70 | 410.60 | 3.32 | 31048.57 | 29991.88 | 3.40 |
| G49240 b | No changes in visual appearance or apparent material loss | 444.10 | 444.00 | 0.02 | 28962.19 | 28949.23 | 0.04 |
| G49240 c | Specimen split along vein during cutting and could not be tested | | | | | | |
| G49240 d | No changes in visual appearance or apparent material loss | 444.30 | 444.30 | 0.00 | 29822.61 | 29783.38 | 0.13 |
| G49240 e | No changes in visual appearance or apparent material loss | 435.20 | 435.20 | 0.00 | 3007.85 | 2985.65 | 0.74 |
| G49240 f | No changes in visual appearance or apparent material loss | 445.40 | 445.30 | 0.02 | 31591.50 | 31584.41 | 0.02 |
| G49240 g | No changes in visual appearance or apparent material loss | 427.60 | 427.40 | 0.05 | 31115.60 | 31053.85 | 0.20 |
| G49240 h | No changes in visual appearance or apparent material loss | 423.20 | 423.20 | 0.00 | 29541.16 | 29475.85 | 0.22 |
| G49240 j | No changes in visual appearance or apparent material loss | 424.40 | 424.30 | 0.02 | 31059.18 | 30998.27 | 0.20 |
| G49240 k | No changes in visual appearance or apparent material loss | 436.40 | 436.40 | 0.00 | 28163.53 | 28119.48 | 0.16 |
| Mean | | | | 0.34 | | | 0.51 |

# AFYON GOLD

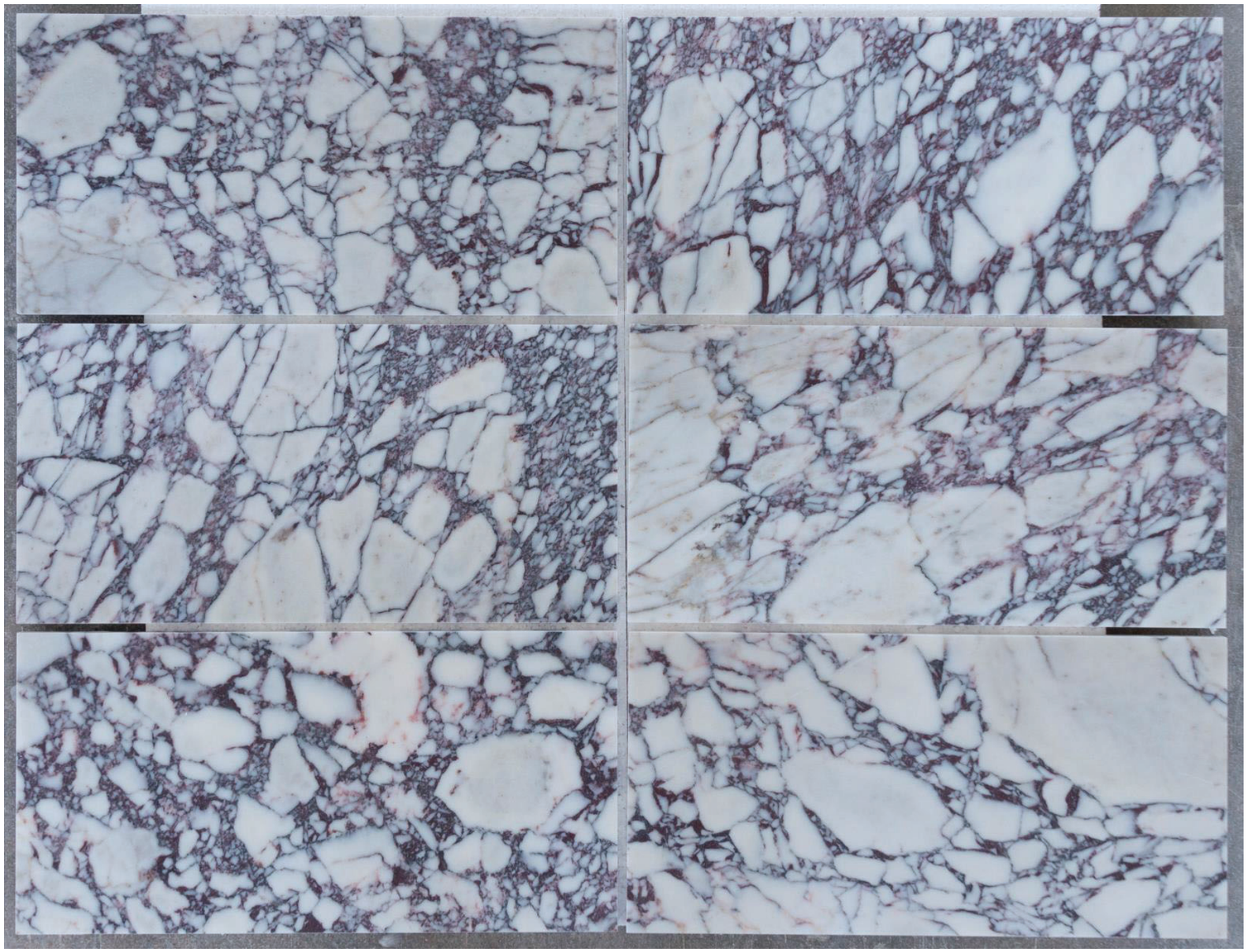
GENERAL DIMENSIONS;

10mm x 6’’x6’’
10mm x 6’’x12’’
10mm x 12’’x12’’
10mm x 12’’x24’’
10mm x 18’’x18’’
10mm x 18’’x36’’
10mm x 24’’x24’’
10mm x 24’’x36’’
10mm x 24’’x48’’

We can produce another dimensions.

# AFYON GOLD APPLICATION PROJECT

# AFYON VIOLET SELECTION



GENERAL DIMENSIONS;

10mm x 6''x6''
10mm x 6''x12''
10mm x 12''x12''
10mm x 12''x24''
10mm x 18''x18''
10mm x 18''x36''
10mm x 24''x24''
10mm x 24''x36''
10mm x 24''x48''

We can produce another dimensions.

# AFYON VIOLET

# SUGAR VIOLET

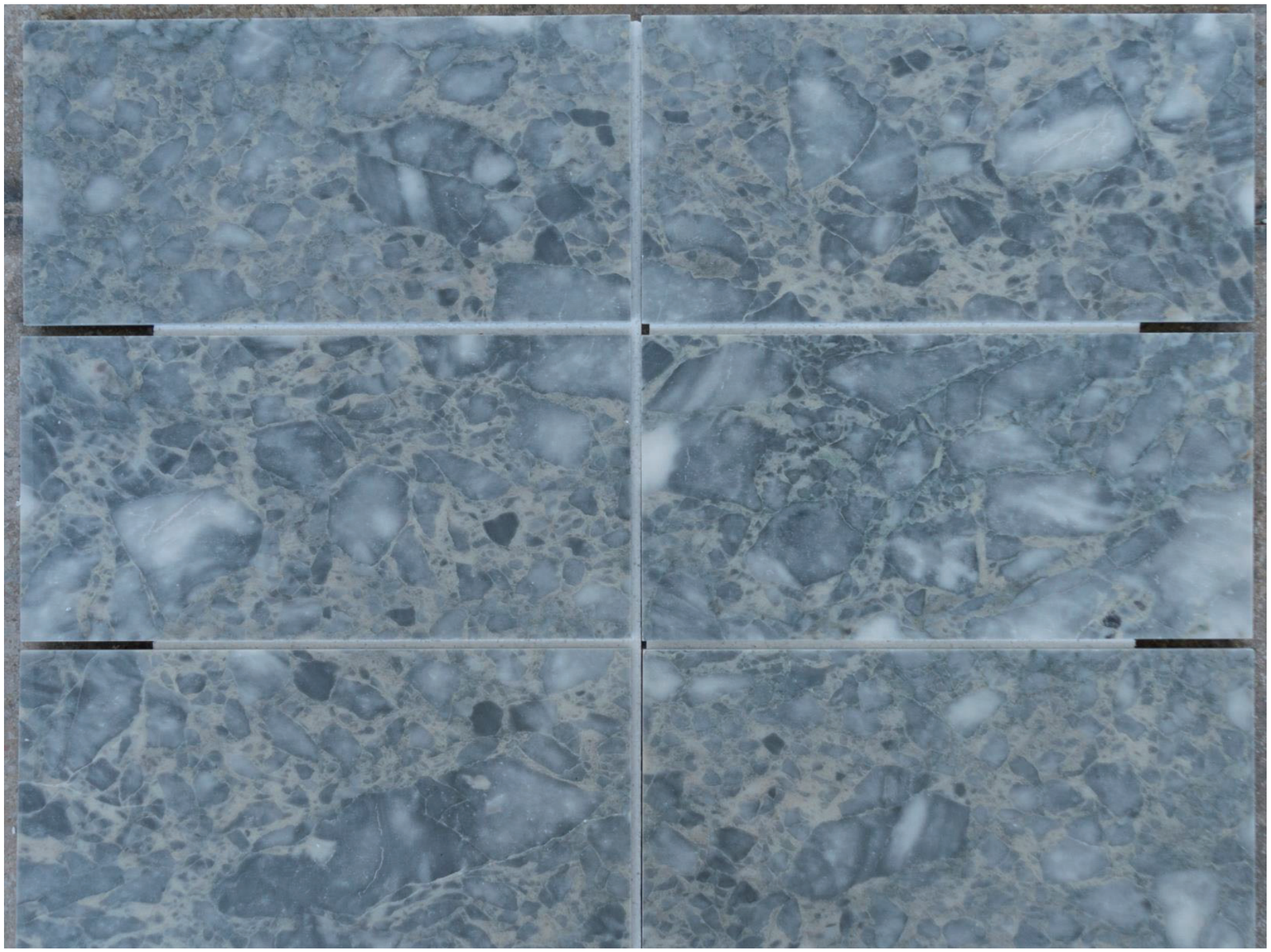
GENERAL DIMENSIONS;

10mm x 6’’x6’’
10mm x 6’’x12’’
10mm x 12’’x12’’
10mm x 12’’x24’’
10mm x 18’’x18’’
10mm x 18’’x36’’
10mm x 24’’x24’’
10mm x 24’’x36’’
10mm x 24’’x48’’

We can produce another dimensions.

# SUGAR VIOLET APPLICATION PROJECT

# FOREST GREY

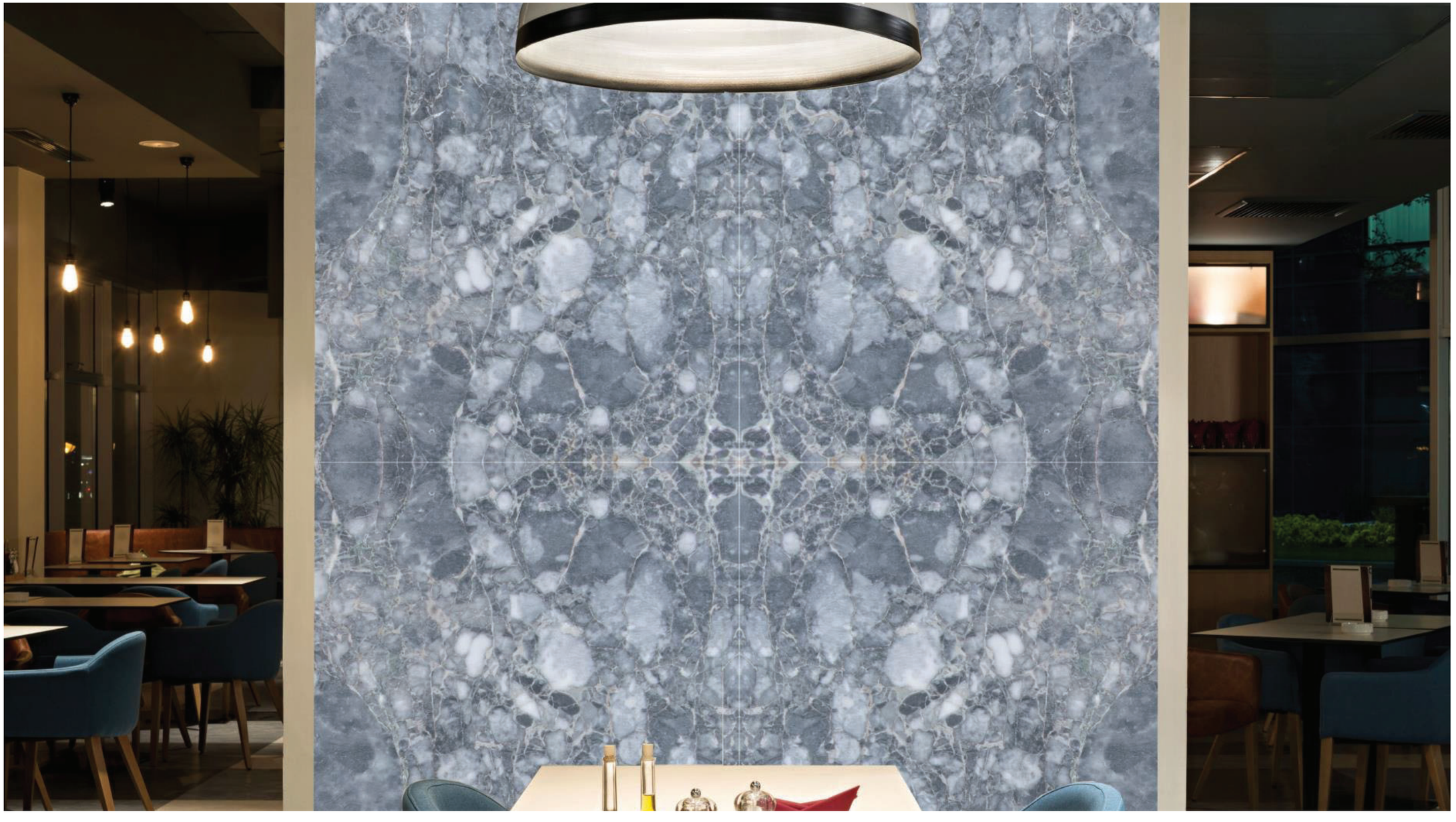


GENERAL DIMENSIONS;

10mm x 6’’x6’’
10mm x 6’’x12’’
10mm x 12’’x12’’
10mm x 12’’x24’’
10mm x 18’’x18’’
10mm x 18’’x36’’
10mm x 24’’x24’’
10mm x 24’’x36’’
10mm x 24’’x48’’

We can produce another dimensions.

# FOREST GREY APPLICATION PROJECT



# TOPAZ WHITE

GENERAL DIMENSIONS;

10mm x 6”x6”
10mm x 6”x12”
10mm x 12”x12”
10mm x 12”x24”
10mm x 18”x18”
10mm x 18”x36”
10mm x 24”x24”
10mm x 24”x36”
10mm x 24”x48”

We can produce another dimensions.

# TOPAZ WHITE APPLICATION PROJECT

# DIAMOND BLUE

GENERAL DIMENSIONS;

10mm x 6''x6''
10mm x 6''x12''
10mm x 12''x12''
10mm x 12''x24''
10mm x 18''x18''
10mm x 18''x36''
10mm x 24''x24''
10mm x 24''x36''
10mm x 24''x48''

We can produce another dimensions.

# DIAMOND BLUE APPLICATION PROJECT

# TROY CLASSIC TRAVERTINE

GENERAL DIMENSIONS;

10mm x 6’’x6’’
10mm x 6’’x12’’
10mm x 12’’x12’’
10mm x 12’’x24’’
10mm x 18’’x18’’
10mm x 18’’x36’’
10mm x 24’’x24’’
10mm x 24’’x36’’
10mm x 24’’x48’’

We can produce another dimensions.

# ROSA FANTASTIC

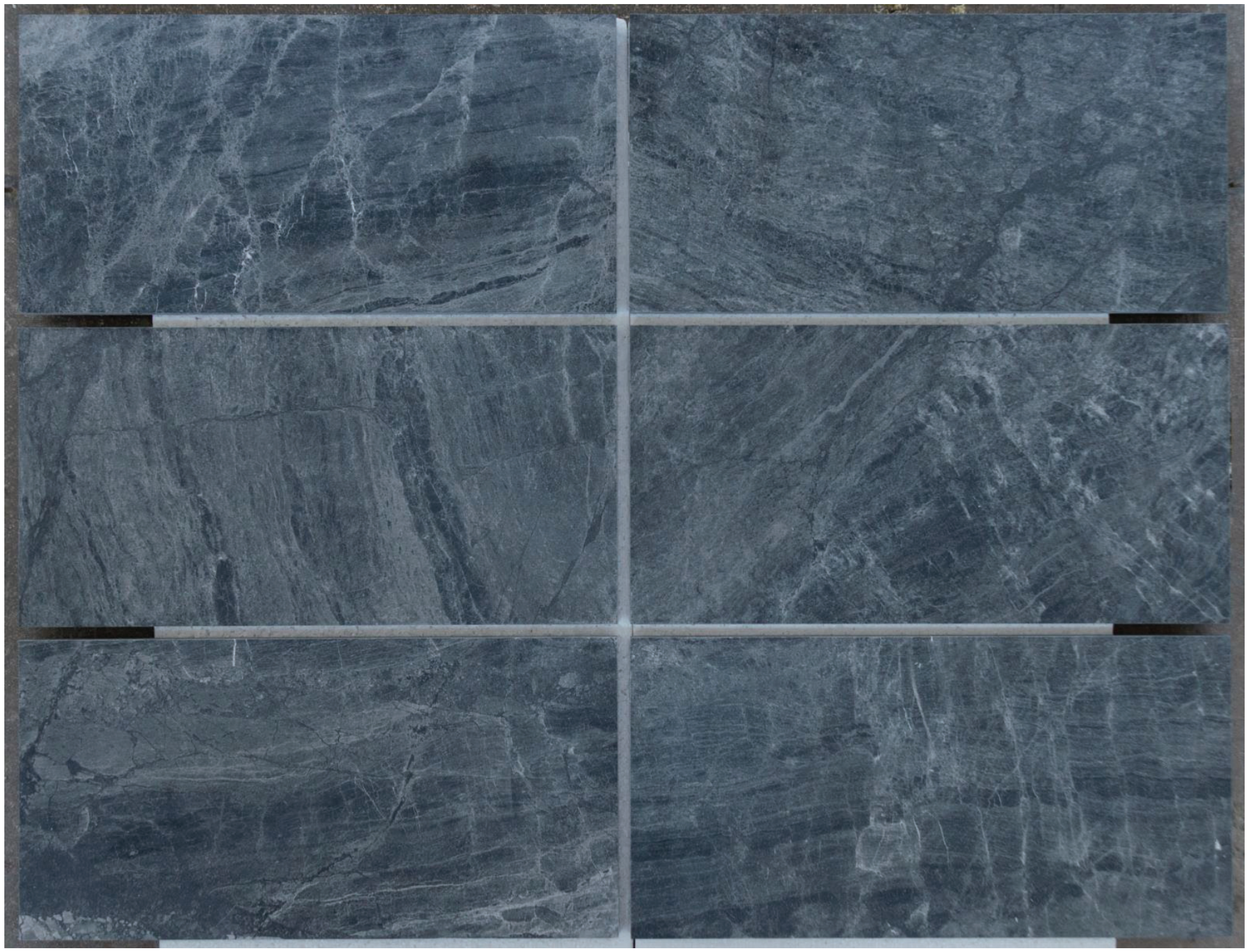
GENERAL DIMENSIONS;

10mm x 6’’x6’’
10mm x 6’’x12’’
10mm x 12’’x12’’
10mm x 12’’x24’’
10mm x 18’’x18’’
10mm x 18’’x36’’
10mm x 24’’x24’’
10mm x 24’’x36’’
10mm x 24’’x48’’

We can produce another dimensions.


DO NOT LIFT BY STRAPS
NO USE CORREAS PARA LEVANTAR
ME SOULEVES PAS L'ARTICLE PAR LES COURROIES
LO NOT LIFT BY STRAPS
NO USE CORREAS PARA LEVANTAR
TR-1107
HT

# PLATINIUM GREY



GENERAL DIMENSIONS;

10mm x 6’’x6’’
10mm x 6’’x12’’
10mm x 12’’x12’’
10mm x 12’’x24’’
10mm x 18’’x18’’
10mm x 18’’x36’’
10mm x 24’’x24’’
10mm x 24’’x36’’
10mm x 24’’x48’’

We can produce another dimensions.

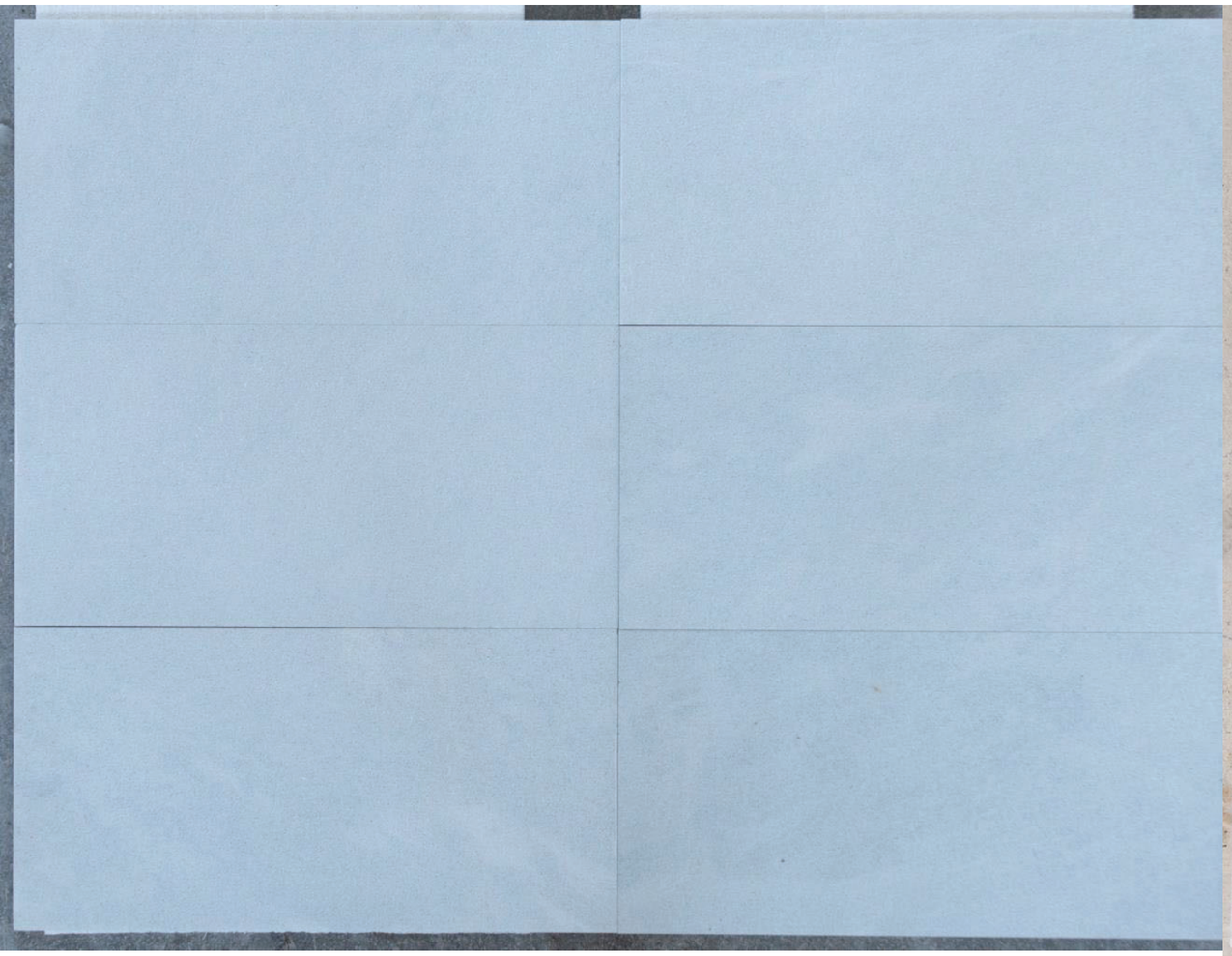
# ICE BLUE

## GENERAL DIMENSIONS;

10-30-50mm x 6”x6”
10-30-50mm x 6”x12”
10-30-50mm x 12”x12”
10-30-50mm x 12”x24”
10-30-50mm x 18”x18”
10-30-50mm x 18”x36”
10-30-50mm x 24”x24”
10-30-50mm x 24”x36”
10-30-50mm x 24”x48”

10-30mmxFrench Pattern Set
10-30mmxRoman Pattern Set
10-30mmx Jumbo  Set 30mmx50mmx
Bullnose Coping 30mmx50mmx
Modern Coping

We can produce another dimensions.



DRY

WET

# ICE APPLICATION PROJECT

# ARGENTO (SANDBLASTED)

## GENERAL DIMENSIONS;

10-30-50mm x 6’’x6’’
10-30-50mm x 6’’x12’’
10-30-50mm x 12’’x12’’
10-30-50mm x 12’’x24’’
10-30-50mm x 18’’x18’’
10-30-50mm x 18’’x36’’
10-30-50mm x 24’’x24’’
10-30-50mm x 24’’x36’’
10-30-50mm x 24’’x48’’

10-30mmxFrench Pattern Set
10-30mmxRoman Pattern Set
10-30mmx Jumbo  Set 30mmx50mmx
Bullnose Coping 30mmx50mmx
Modern Coping

We can produce another dimensions.

WET

DRY

# ARGENTO APPLICATION PROJECT

# FOREST GREY

## GENERAL DIMENSIONS;

10-30-50mm x 6”x6”
10-30-50mm x 6”x12”
10-30-50mm x 12”x12”
10-30-50mm x 12”x24”
10-30-50mm x 18”x18”
10-30-50mm x 18”x36”
10-30-50mm x 24”x24”
10-30-50mm x 24”x36”
10-30-50mm x 24”x48”

10-30mmxFrench Pattern Set
10-30mmxRoman Pattern Set
10-30mmx Jumbo  Set 30mmx50mmx
Bullnose Coping 30mmx50mmx
Modern Coping

We can produce another dimensions.

DRY

WET

# ANOTHER FINISHED

# VIOLETTA MARBLE

DRY

WET

# Analysis Report

| **TEST / ANALİZLER**<br>*Test / Analysis* | **TEST / ANALİZ METODU**<br>*Test / Analysis Method* |
|---|---|
| ***Pandül Deney Donanımıyla Kayma Direncinin Tayini (Islak Zeminde)**<br>*(Determination of the Slip Resistance by Means of the Pendulum Tester) (Wet Conditions)* | TS EN 14231: 2004 |

| **Deney Başlama Tarihi** *(Test Start Date)* | 11.11.2019 | | **Deney Bitiş Tarihi** *(Test Finish Date)* | | 12.11.2019 | |
|---|---|---|---|---|---|---|
| **Test No** | **Test 1** | **Test 2** | **Test 3** | **Test 4** | **Test 5** | **Test 6** |
| **Numune Boyutu (mm)** *(Sample Dimensions)* | 200x100x20 | 200x100x20 | 200x100x20 | 200x100x20 | 200x100x20 | 200x100x20 |
| **Numune Sıcaklığı** *(Sample Temperature)* | 18,2 | 18,2 | 18,2 | 18,2 | 18,2 | 18,2 |
| **Düzeltme Faktörü** *(Correction Factor)* | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 |
| **Ortalama Düzeltme Faktörü** *(Average Correction Factor)* | 0,4 | | | | | |
| **Sıkaladan Okunan Değer (SRV)** *(The Value Read of Scale)* | 15 | 13 | 16 | 14 | 13 | 16 |
| **Sıkaladan Okunan Değer (180° döndürülmüş durumda) (SRV)** *(The Value Read of Scale - Rotated 180°)* | 16 | 14 | 15 | 13 | 12 | 14 |
| **Ortalama Değer (SRV)** *(Average Value)* | 14,3 | | | | | |
| **Düzeltilmiş Ortalama Değer (SRV)** *(Correction Average Value)* | **13,9** | | | | | |
| **Standart Sapma (SRV) (±)** *(Standard Deviation)* | 1,4 | | | | | |

| **TEST / ANALİZ**<br>*Test / Analysis* | **TEST / ANALİZ METODU**<br>*Test / Analysis Method* |
|---|---|
| ***Pandül Deney Donanımıyla Kayma Direncinin Tayini (Kuru Zeminde)**<br>*(Determination of the Slip Resistance by Means of the Pendulum Tester) (Dry Conditions)* | TS EN 14231: 2004 |

| **Deney Başlama Tarihi** *(Test Start Date)* | 11.11.2019 | | **Deney Bitiş Tarihi** *(Test Finish Date)* | | 12.112 019 | |
|---|---|---|---|---|---|---|
| **Test No** | **Test 1** | **Test 2** | **Test 3** | **Test 4** | **Test 5** | **Test 6** |
| **Numune Boyutu (mm)** *(Sample Dimensions)* | 200x100x20 | 200x100x20 | 200x100x20 | 200x100x20 | 200x100x20 | 200x100x20 |
| **Numune Sıcaklığı** *(Sample Temperature)* | 20,1 | 20.0 | 20,1 | 20,1 | 20,0 | 20,0 |
| **Düzeltme Faktörü** *(Correction Factor)* | 0 | 0 | 0 | 0 | 0 | 0 |
| **Ortalama Düzeltme Faktörü** *(Average Correction Factor)* | 0 | | | | | |
| **Sıkaladan Okunan Değer (SRV)** *(The Value Read of Scale)* | 25 | 26 | 24 | 24 | 25 | 26 |
| **Sıkaladan Okunan Değer (180° döndürülmüş durumda) (SRV)** *(The Value Read of Scale - Rotated 180°)* | 24 | 25 | 25 | 24 | 25 | 24 |
| **Ortalama Değer (SRV)** *(Average Value)* | 24,8 | | | | | |
| **Düzeltilmiş Ortalama Değer (SRV)** *(Correction Average Value)* | **24.8** | | | | | |
| **Standart Sapma (SRV) (±)** *(Standard Deviation)* | 0,8 | | | | | |

# Our Offices

## Turkey

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