



Farama<sup>®</sup>

TERRAZZO TILES



With the understanding of sustainable environment and sustainable development, we produce our own energy and respect nature by manufacturing ECO- friendly products with zero waste.

We Protect Our  
**Nature**

## TERRAZZO TILES

**farama** was founded in **1974** in Tarsus-Mersin by Bekir Ovacilli.  
Established on a **45.000 m2** area **farama** produces **5000 m2** flooring, **1000 m2** facade  
and **800 metre** precast products DAILY

We have been colouring surfaces **for half a century** with corporate culture and  
inspiration from nature.

## Surface Options



Polished



Honed



Brushed



Sandblasted



Medium Sandblasted



Bush Hammer



wash Concrete

### Surface Code Descriptions

**SA:** Polished/Glossy - **HON:** Honed  
**ESA:** Aged/Patinato/Brushed - **ASOS:** Sandblasted  
**AREN:** Medium Sandblasted - **MUC:** Bush Hammer  
**B:** Washbeton

## Areas of Use



Metro Stations



Hotels



Park & Gardens



Industrial Plants



Stadiums



Airports



Hospitals



Schools



Courthouses



Prisons



Plazas - Residences -  
Residentials



Shopping Centres



Restaurants



Cafes

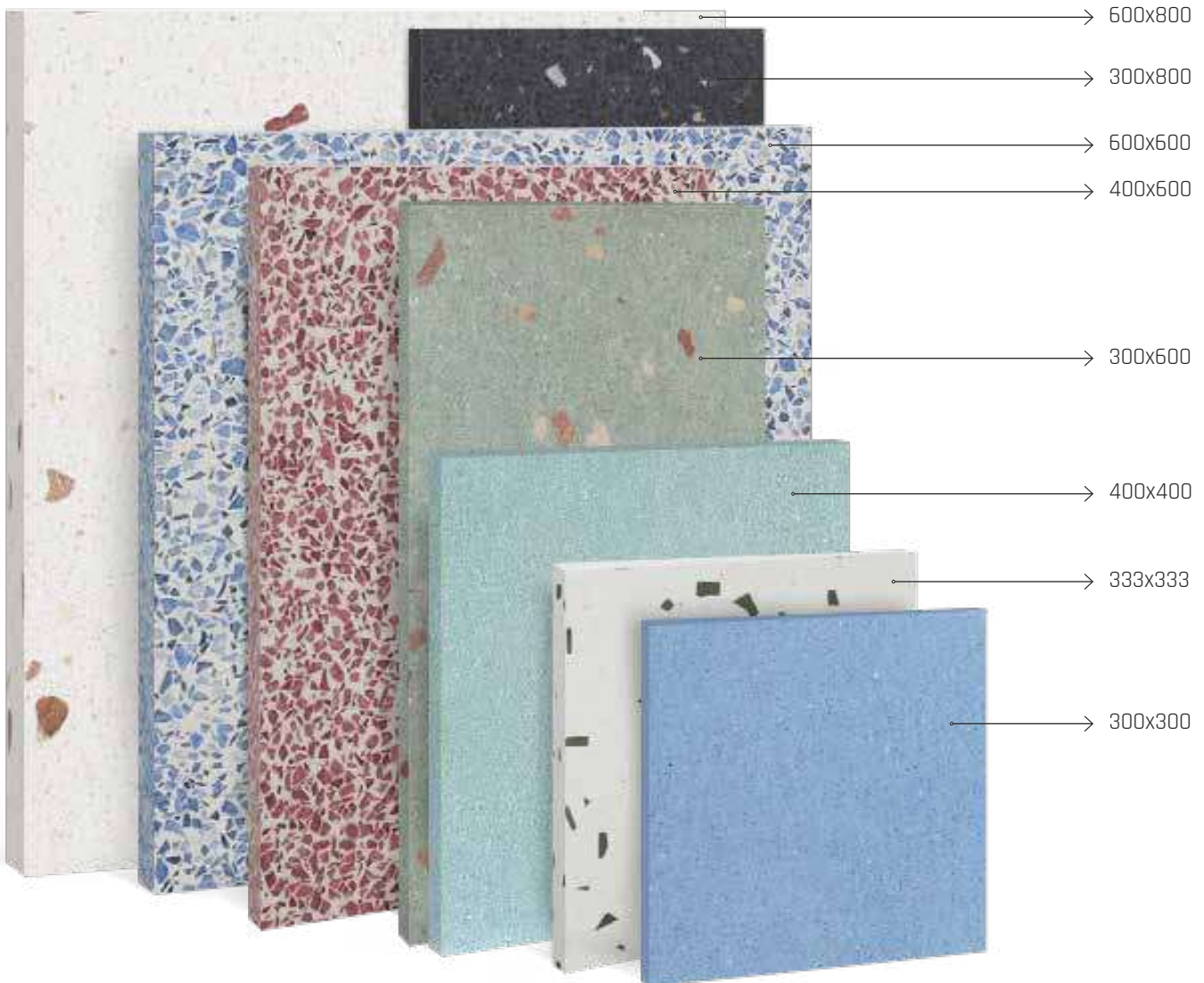


Markets

# Product Dimensions

Size Options (mm)	Thickness Options (mm)			
	Single Layer		Double Layer	
	Standard (mm)	Alternative thicknesses *	Standard (mm)	Other (mm)
300x300	18	14-20	30	30-35
333x333	18	16-20	30	30-35
400x400	19	18-50	33	30-40
300x600	29	22-32	-	-
400x600	29	22-32	-	-
600x600	29	22-32	-	-
300x800	29	22-32	-	-
600x800	29	22-32	-	-

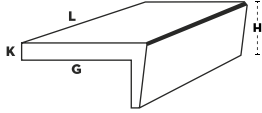
\* Alternative thicknesses are available at additional cost.



# Construction Finishing Elements (For All Models)

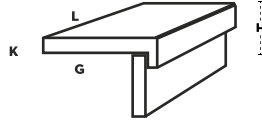
## L STAIR

L=Max.220 cm / H=14-20 cm  
G=25-60 cm / K=3,5-4,5 cm



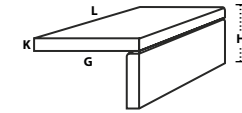
## L FLAT STAIR

L=Max.220 cm / H=14-22 cm  
G=25-60 cm / K=3,5-4,5 cm



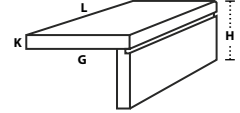
## FLAT STAIR

L=Max.220 cm / H=14-22 cm  
G=25-60 cm / K=3,5-8 cm



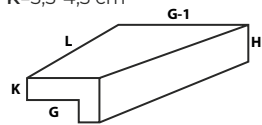
## FLAT STAIR - GROOVED

L=Max.220 cm / H=14-22 cm  
G=25-60 cm / K=3,5 - 8 cm



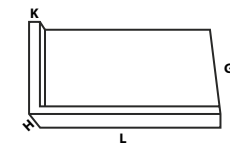
## ROTARY STAIR

L=Max.220 cm / H=14-20 cm  
G&G1=Serbest En (Max.60 cm)  
K=3,5-4,5 cm



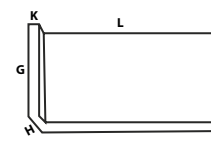
## BLOCK STAIR

L=Max.220 cm / H=10 cm  
G=30-40 cm / K=3,5-4,5 cm



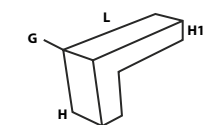
## BLOCK LANDING LATH

L=Max.220 cm / H=10 cm  
G=30-40 cm / K=3,5-4,5 cm



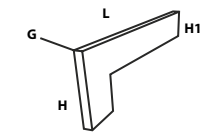
## L SKIRTING

L=Max.45 cm / H=15-20 cm  
G=6 cm / H1=4 cm



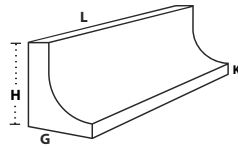
## L SKIRTING

L=Max.40 cm / H=15-20 cm  
G=2 cm / H1=6 cm



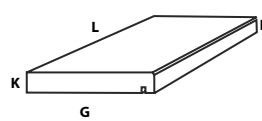
## FRENCH SKIRTING

L=Max.80 cm H=Max.13 cm  
G=Max.28 K=2 cm



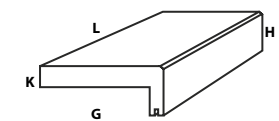
## FLAT WINDOWSILL

L=Max.220 cm / H=2,7-4 cm  
G=11-60 cm



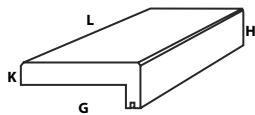
## L WINDOWSILL

L=Max.220 cm / H=6-15cm  
G=11-60 cm / K=3,5-5 cm



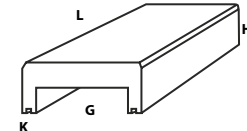
## L CAPSTONE

L=Max.220 cm / H=6-15 cm  
G=11-60cm / K=3,5-5 cm



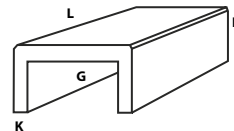
## U CAPSTONE

L=Max.220 cm / H=6-10 cm  
G=15-60 cm / K=3,5-5 cm



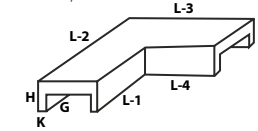
## U CAPSTONE

L=Max.220 cm / H=10-20 cm  
G=15-60 cm / K=3,5-4,5 cm



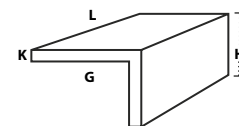
## CORNER U CAPSTONE

L1,2,3,4(İsteğe Özel)  
H=6-20 cm G=15-100 cm  
K=3-4,5 cm



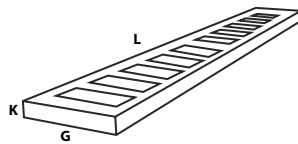
## CORNER LEMENT CONSTRUCTION

L=80 cm / H=15-30 cm  
G=25-50cm / K=4 cm



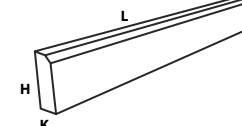
## TRENCH DRAIN

L=80 cm / K=4-6 cm  
G=20-20,5 cm



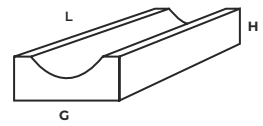
## CHAMFERED SKIRTING

L=30-80 / H=6-20 cm  
K=1,6-2 cm



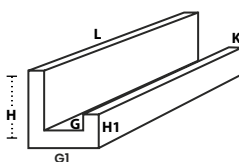
## RAIN GUTTER

L=35 / H=8,5 cm  
G=25 cm



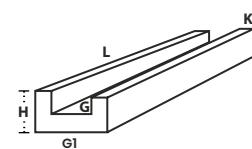
## WATER CONDUIT - 1

L=100 cm H=18 cm H1=8 cm  
G=9 cm G1=18 cm K=4 cm



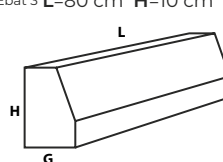
## WATER CONDUIT - 2

L=100 cm H=8 cm G=9 cm  
G1=18 cm K=4 cm



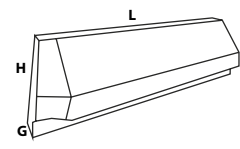
## KERB

Ebat 1 L=50 cm H=18 cm G=12 cm  
Ebat 2 L=70 cm H=20 cm G=10 cm  
Ebat 3 L=80 cm H=10 cm G=8 cm



## TREE FRAMEWORK

L=120 / H=18 cm  
G=12 cm



# Advantages Of Terrazzo



## Why Terrazzo?

It is economical and long-lasting compared to equivalent products such as tile, marble, ceramic. Its colour is homogenous, non-slip surface and hygienic. Colour and pattern sets can be made in outdoor areas. It is resistant to impacts, heat and freezing and has high abrasion resistance. It can be produced in the desired shape and size. It also provides the advantage of finding the same product even after decades.

## Continuous Quality

Based on its half-century experience, As Karo uses the techniques it uses in production and its knowledge and experience, by blending it with continuous R&D, it has succeeded in making its corporate culture and product quality perfect and continuous.

Production is carried out in accordance with TSE -EN - ISO - SII - NF standards.

## Featured Tiles with Extra Features

As Karo can also produce high temperature resistant, heat insulated, antistatic, acid resistant products with pH level 4-13. These products are specially produced, project-based products other than mass production.

## Homogeneity Of The Mixture

In all products of As Karo, the formula of the mixture and the water-cement ratio do not change. The mixture itself is always dense and homogenous. For this reason, the excess water in the mixture is removed to ensure a homogeneous and non-porous structure.

## Vacuum Effect

As Karo's products are produced under vacuum, press and vibration. Vacuum and press, by removing air from the mixture, provides perfect adhesion to the aggregates and densifies the mixture. It has a firmer texture and less water absorption.

## Customized Product Production

By choosing terrazzo tile, you can have a product made in the pattern you want. You can have this product special for you and your project designed in the colour and model you want.

## Steam Curing (Product Hardening)

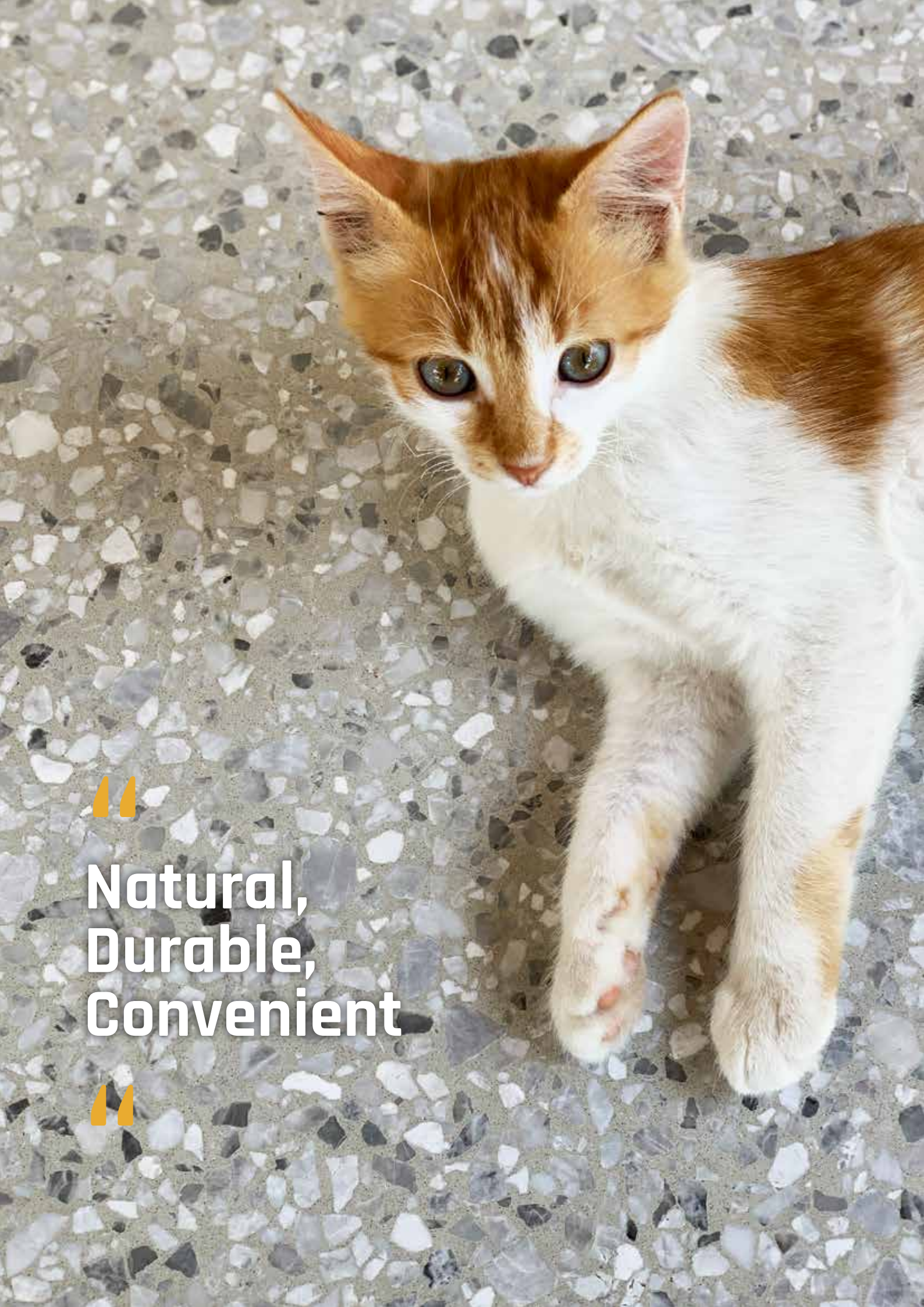
All products of As Karo are produced within 24 hours after being compressed by vacuum, vibration and press. It is kept in curing rooms at a stable temperature and hardened.

## % 100 Domestic

All of As Karo's products are kept in curing chambers at a stable temperature for 24 hours after being compressed by vacuum, vibration and press, and then hardened.

## ECO Friendly

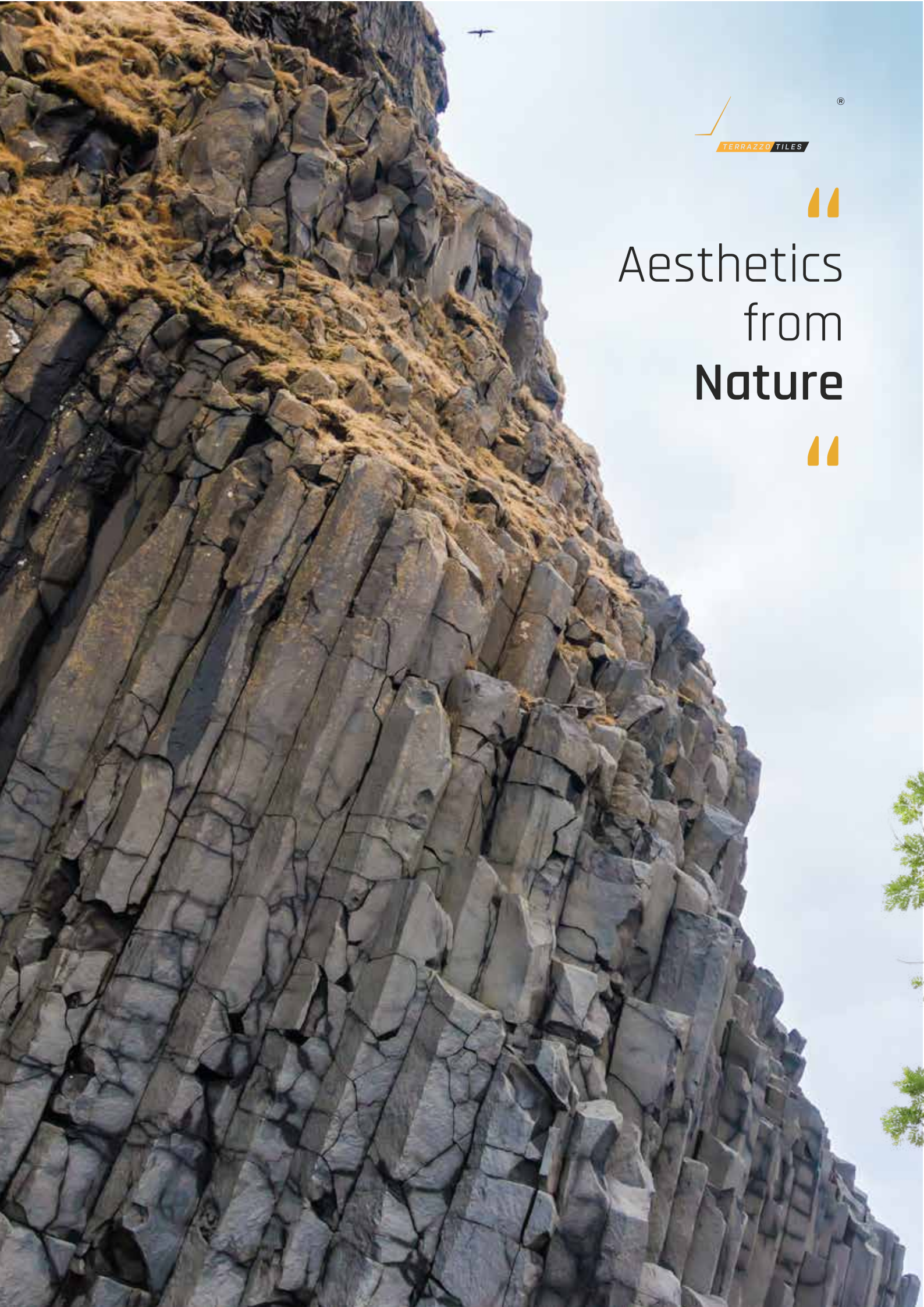
It is not harmful to health. It is natural and eco- friendly. As Karo produces the electricity it needs in its own SPP facility



**Natural,  
Durable,  
Convenient**







“  
Aesthetics  
from  
Nature



## ECO Friendly Products

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It is produced entirely with natural stone aggregates obtained from marble, basalt, granite, quartz and silica quarries. The residues remaining after the processing of the products produced by **farama** are transformed and **do not pollute the environment**.



# Facade Coatings

farama offers a total of 8000 types of facade cladding plates with 1600 different colours and 5 different surface alternatives.

- Facade claddings are applied with mechanical anchorage system.
- It does not require painting, its colour does not fade, it is homogeneous and long-lasting.

A floor covering in the same dimensions as the facade.

## Surface Options (Slip and Skid Resistance)

Polished (R9) - Honed (R9-R10) - Brushed (R9) - Sandblasting (R10-R11) - Bush Hammer (R12-R13)



## Facade Coatings



SA-762



SA-762-1



SA-762-2



SA-762-3



SA-762-4



SA 640-1



SA-762-6



SA-762-7



SA-762-8



SA-762-8-G



SA-762-9



SA-762-10



SA-762-11



SA-762-12



SA-762-14



SA-762-15



## Facade Coatings



MUC-762



MUC-763



MUC-762-2



MUC-762-3



MUC-762-4



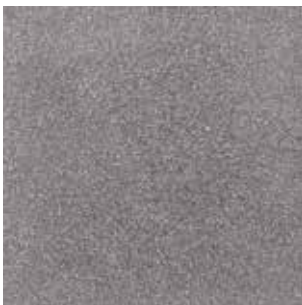
MUC-840



MUC-762-6



MUC-762-7



MUC-762-8



MUC-357



MUC-762-10



MUC-762-11



MUC-762-12

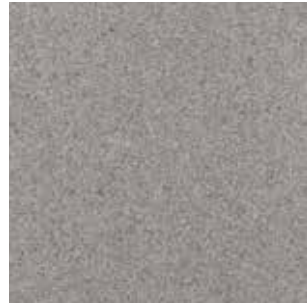
**Note** :In facade cladding Bush Hammer products, the edges have a natural-looking broken structure due to the type and structure of the stone.



## Facade Coatings



ASOS-08



ASOS-780-1



ASOS-762-2



ASOS-762-3



ASOS-762-4



ASOS-933



ASOS-762-6



ASOS-762-7



ASOS-762-8



ASOS-762-8-G



ASOS-857-4



ASOS-762-10



ASOS-938



ASOS-773

# Facade Mounting **Application**

In order for the exterior TERRAZZO coatings to be made in a healthy way, the most common application method is the anchorage system.

The most common anchorage system is the rail system and the TERRAZZO coating in buildings in accordance with this system provides serious advantages.

We can list the advantages of the rail system, which is made entirely in the form of steel construction, compared to bonding as follows;

- Bonded natural stones and terrazzos fall out over time. Such a problem is not encountered in installations made with an anchor system.
- While there is no area for insulation in the bonding system, an area for insulation is formed in the anchored system.
- In the bonding system, a certain order of natural stones and terrazzos can be ensured as much as the smoothness of the concrete, while in anchored systems, order can be provided with ease of adjustment.

## Technical Information

It can be used safely in the installation of stones up to 80 kg in any size with a thickness of min 20 mm.

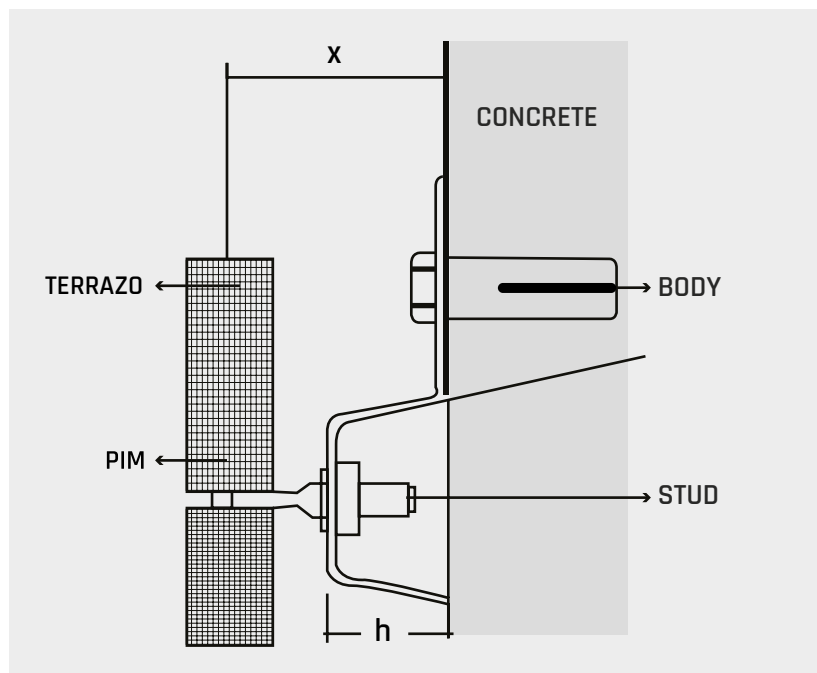
It can be connected to concrete with M8 steel dowel or to hanger profiles with M8 bolt set.

The distance between the connected surface and the stone axis (x can vary between 4 cm and 16 cm.

The body, stud and pin forming the system are made of AISI 304 quality stainless steel.

It is recommended to use 4 mm pins for 2 cm thick stones and 5 mm pins for stones with a thickness of 3 cm and above.

## Technical Drawing



## Materials Used



Retainer Anchor



Z Anchor



U Profile



Holder Profile



Carrier Cantilever



Assembly Example



Assembly Example



Assembly Example



Assembly Example



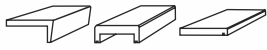
Assembly Example



## Interior Marble Aggregate Terrazzo Tiles

Crushed marble aggregates in 0-30 mm sizes are bonded with 400 - 450 doses of cement and produced by processing according to the desired surface. Terrazzo tiles used interior can be produced in hundreds of different colours with oxide paints that will not fade.

There are 1600 different models in our current colour chart. It does not contain chemical substances, is not harmful to health and is hygienic.

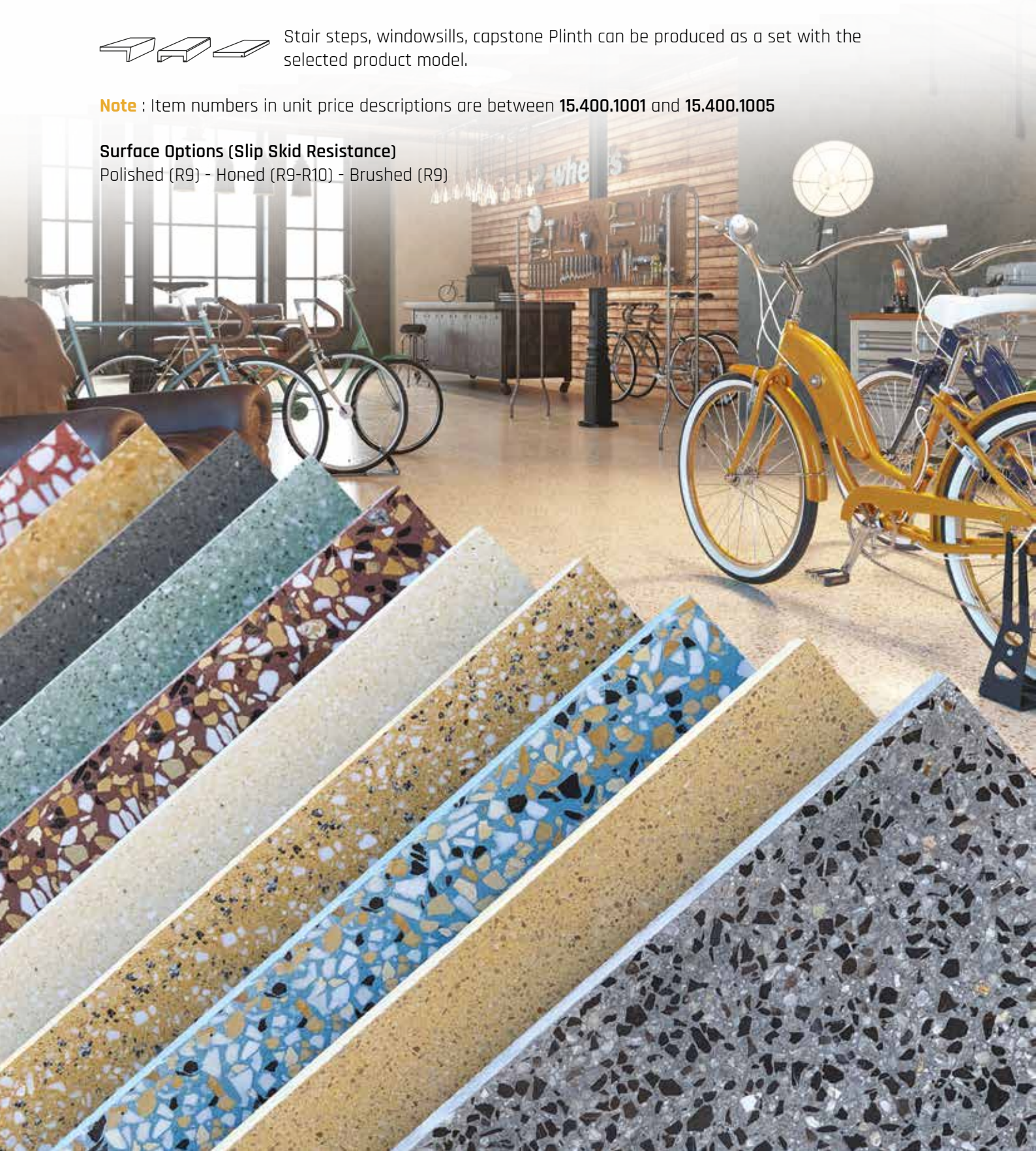


Stair steps, windowsills, capstone Plinth can be produced as a set with the selected product model.

**Note** : Item numbers in unit price descriptions are between **15.400.1001** and **15.400.1005**

### Surface Options (Slip Skid Resistance)

Polished (R9) - Honed (R9-R10) - Brushed (R9)



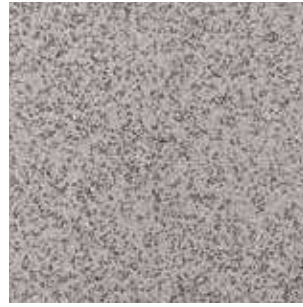
## Interior Marble Aggregate Terrazzo Tiles



SA-763



SA-840



SA-240



SA-949



SA-647



SA-644



SA-400



SA-712



SA-640



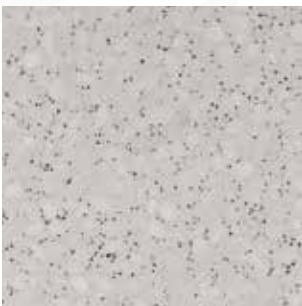
SA-643



SA-492



SA-357



SMK-03



SA-897



SA-941



SA-681



SA-796



SA-841



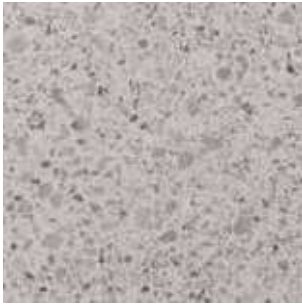
SA-904



SA-241

## Interior Marble Aggregate Terrazzo Tiles

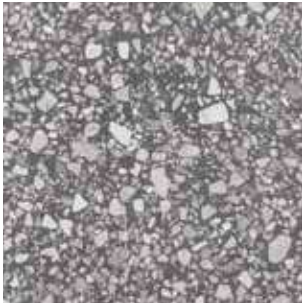
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SA-790



SA-791



SA-792



SA-793



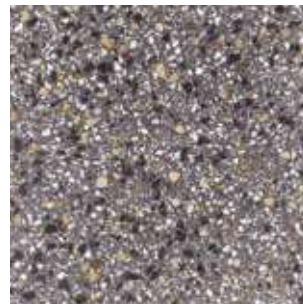
SA-946



SA-794



SA-795



SA-775



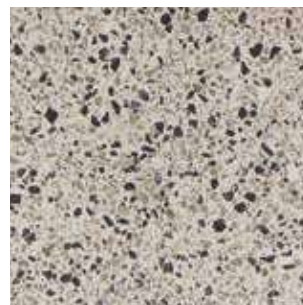
SA-913



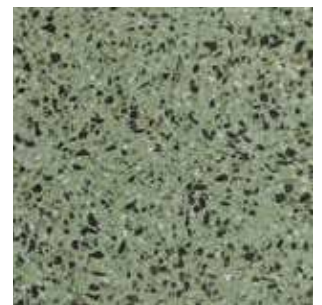
SA-2000



SA-2001



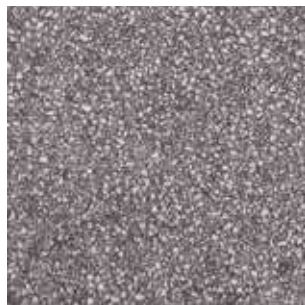
SA-2002



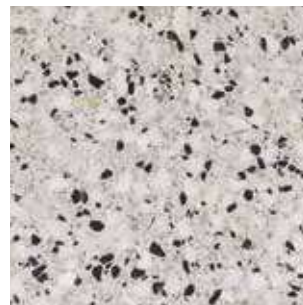
SA-256



SA-798



SA-889



SA-774



SA-861

## Interior Marble Aggregate Terrazzo Tiles



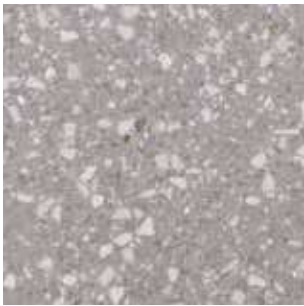
SA-773



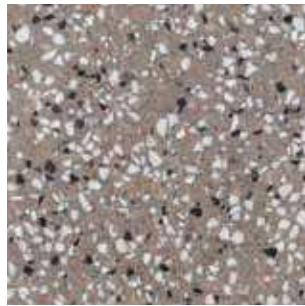
SA-783



SA-934



SA-778



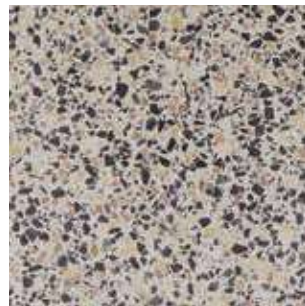
SA-800



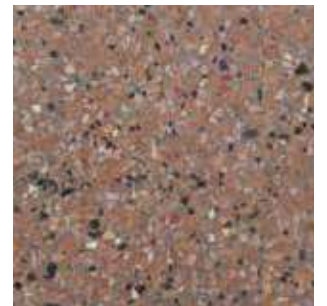
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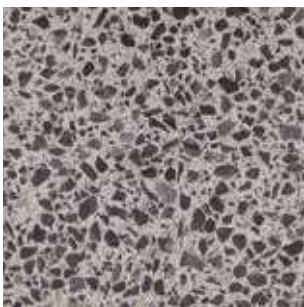
SA-594-1



SA-759



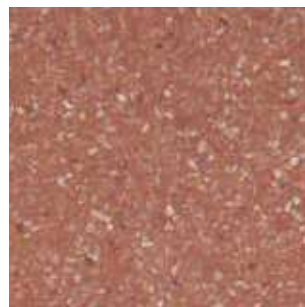
SA-727



SA-868-1



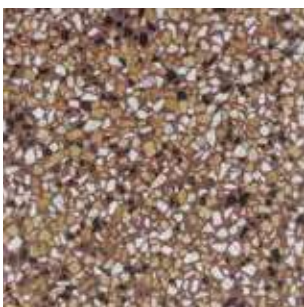
SA-772



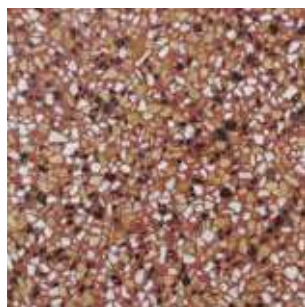
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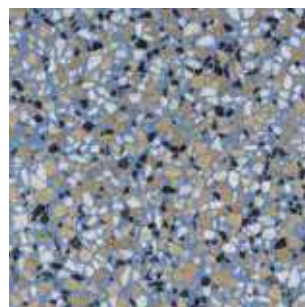
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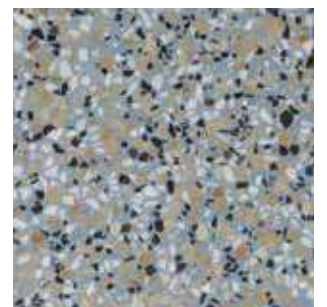
SA-1004-1



SA-1004-2



SA-1004-3



SA-1004-4

## Interior Marble Aggregate Terrazzo Tiles



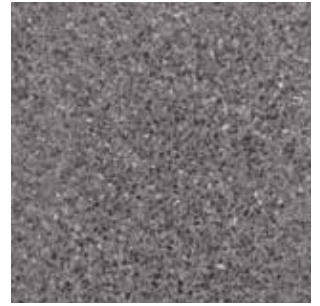
SMK-06



SA-228



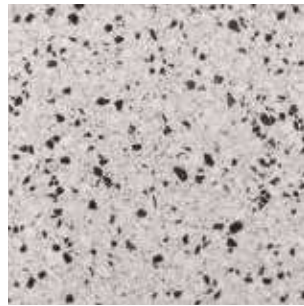
SA-785



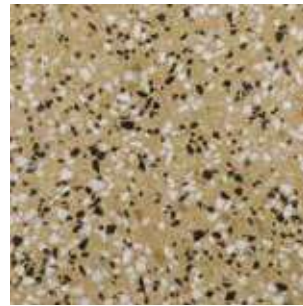
SA-627-1



SA-784



SA-803



SA-1008



SA-1005



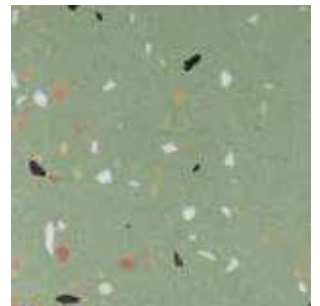
SA-852



SA-867



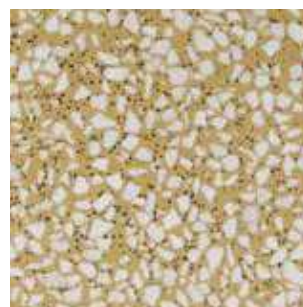
SA-947



SA-946



SA-794



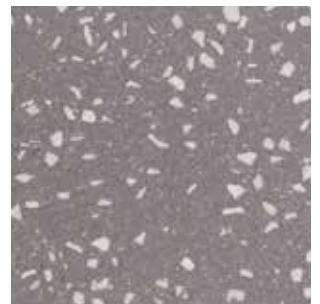
SMK-01



SMK-07



SMK-12



SA-918

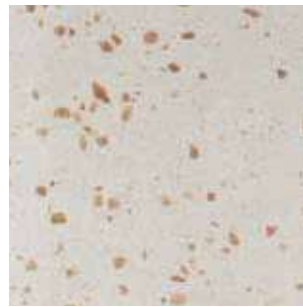
## Interior Marble Aggregate Terrazzo Tiles



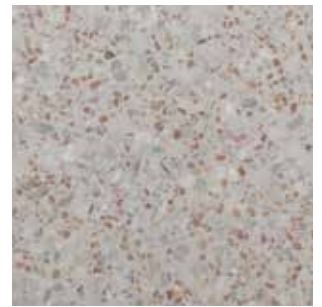
SA-924



SA-952



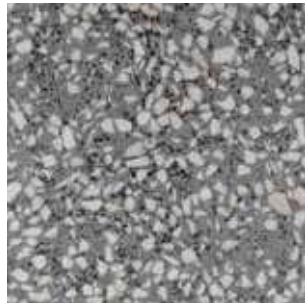
SA-934



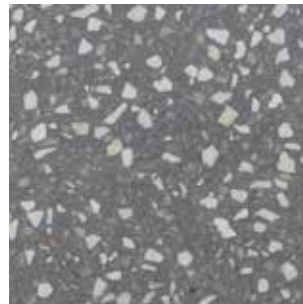
SA-953



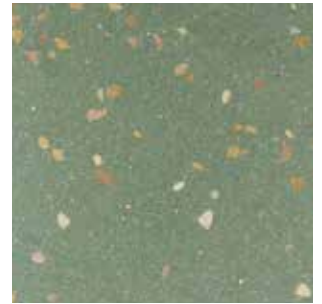
SA-954



SMK-14



SA-955



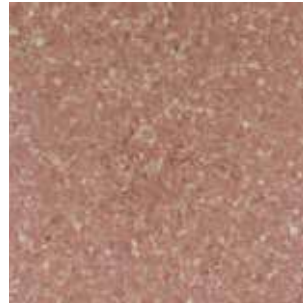
SA-935



SA-956



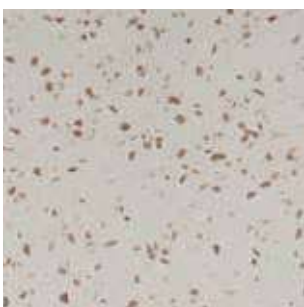
SA-957



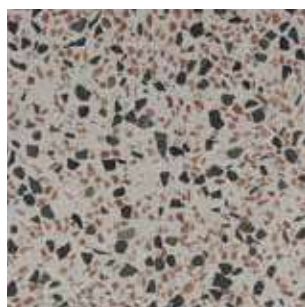
SA-958



SA-931



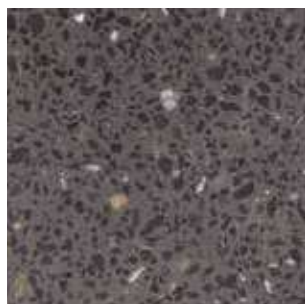
SA-959



SA-960



SA-961



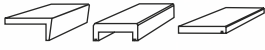
SA-865-1



SA-962

# Interior Granite Aggregate Terrazzo Tiles

Crushed granite and marble aggregates in 0-30 mm sizes are bonded with 400 - 450 doses of cement and processed according to the desired surface. The surfaces of terrazzo tiles used interior are polished, honed and aged. It can be produced in thousands of different colours. It does not contain chemical substances, is not harmful to health and is hygienic. The hardness of granite marble is higher than normal marbles. For this reason, products made with granite mosaic have higher strength.



Stair steps, windowsills, capstone Plinth can be produced as a set with the selected product model.

**Note :** Item numbers in unit price descriptions are between **15.400.1101** and **15.400.1105**.

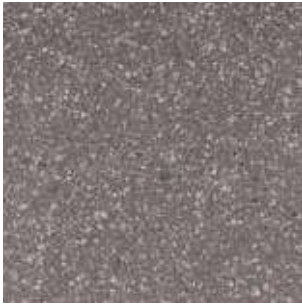
## Surface Options (Slip Skid Resistance)

Polished (R9) - Honed (R9-R10) - Brushed (R9)



## Interior Granite Aggregate Terrazzo Tiles

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SA-857-5



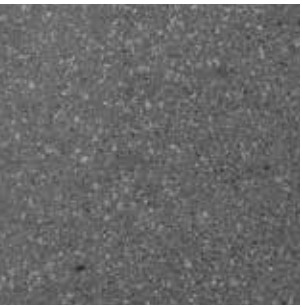
SA-857-6



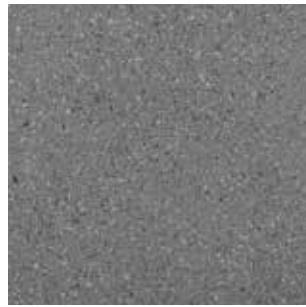
SA-857



SA-685



SA-780



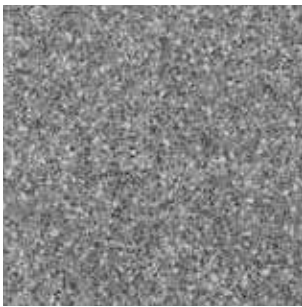
SA-780-1



SA-857-4



SA-799



SA-705



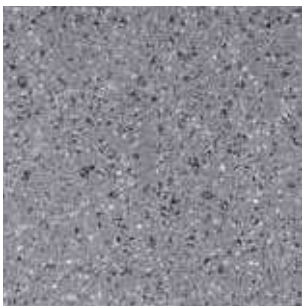
SA-505



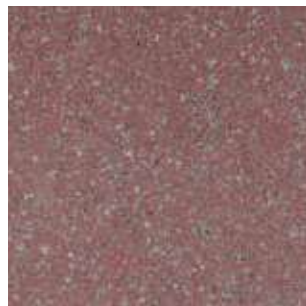
SA-500



SA-683



SA-857-2



SA-686



SA-708



SA-891



SA-500



## Interior Quartz Added Terrazzo Tiles

It is produced by mixing 80% marble and granite aggregates with 20% quartz aggregates and bonded with high dose cement. The surfaces of terrazzo tiles used interior are polished, honed and brushed. It has thousands of different colour options.



Stair steps, windowsills, capstone Plinth can be produced as a set with the selected product model.

The hardness of quartz is 8. In this way, the product provides of a higher standard of abrasion resistance.

**Note :** Item numbers in unit price descriptions are between **15.400.1201** and **15.400.1205**.

**Important :** We can obtain more resistant and longer lasting products by adding quartz additives between **20% and 30%** to all our products without any colour and texture change.

### Surface Options (Slip and Skid Resistance)

Polished (R9) - Honed (R9-R10) - Brushed (R9)



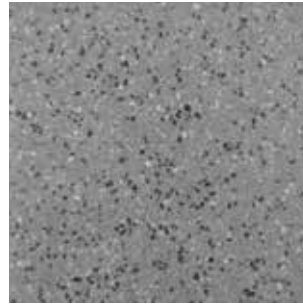
## Interior Quartz Added Terrazzo Tiles



SA-919



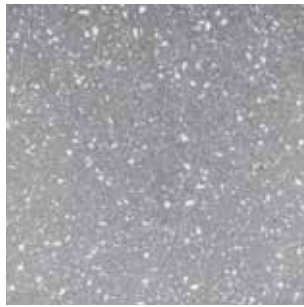
SA-904



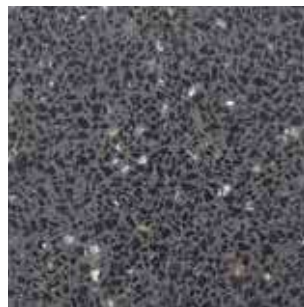
SA-855



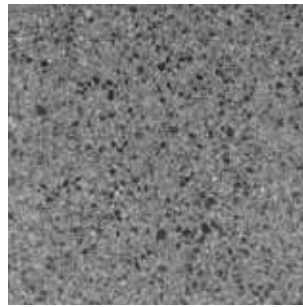
SA-923



SA-838



SA-839



SA-627-2



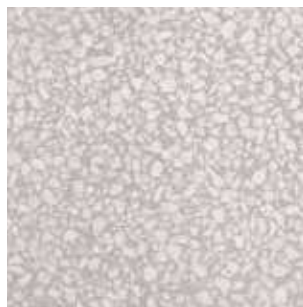
SA-776



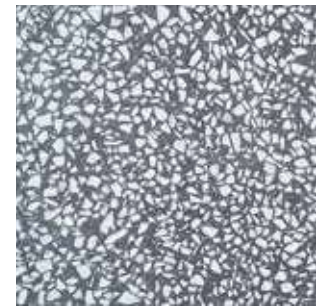
SA-974



SA-879



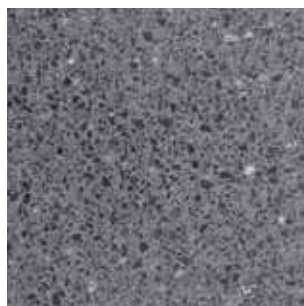
SA-907



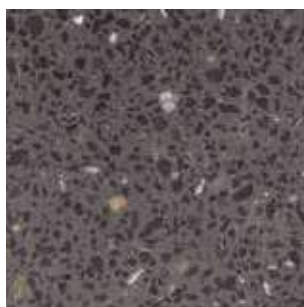
SA-908



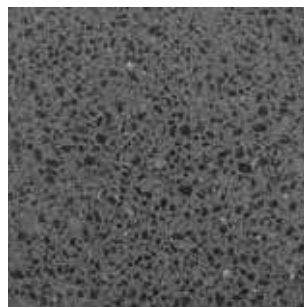
SA-868



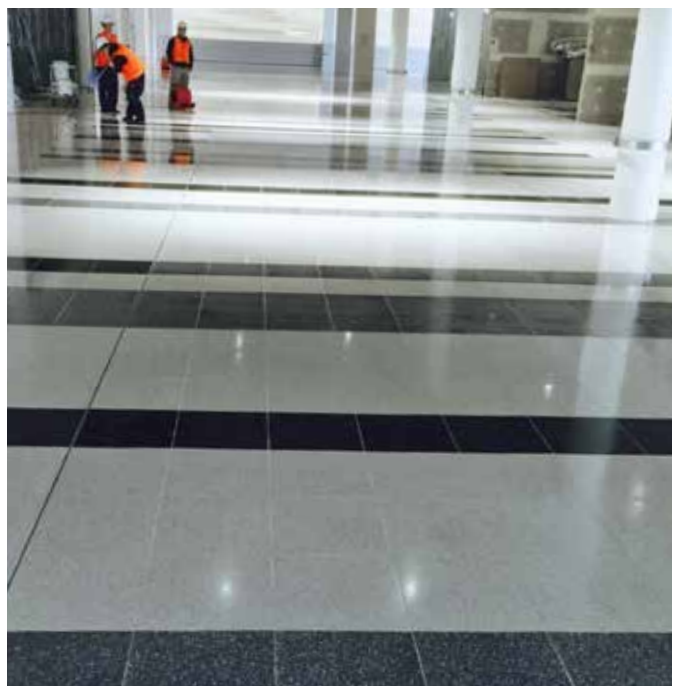
SA-627



SA-865



SA-363



## Special Production Terrazzo Tiles

For interior and exterior use, colours and models that are not available in our mass production can be developed in special colours and surfaces for your project and can be produced with the desired strength and durability.

- 30 mm thick high-strength products on raised floors
- Colours to be liked from the RAL catalogue
- Heat insulating tiles
- High temperature resistant tiles (1100 C0)
- Tiles that can withstand Ph level 4-13
- Antistatic tiles



Stair steps, windowsills, capstone Plinth can be produced as a set with the selected product model.

### Surface Options (Slip and Skid Resistance)

Polished (R9) - Honed (R9-R10) - Brushed (R9) - Sandblasting (R10-R11) - Bush hammer (R12-R13)



## Special Production Terrazzo Tiles



SA-631



SA-610



SA-605



SA-603



SA-607



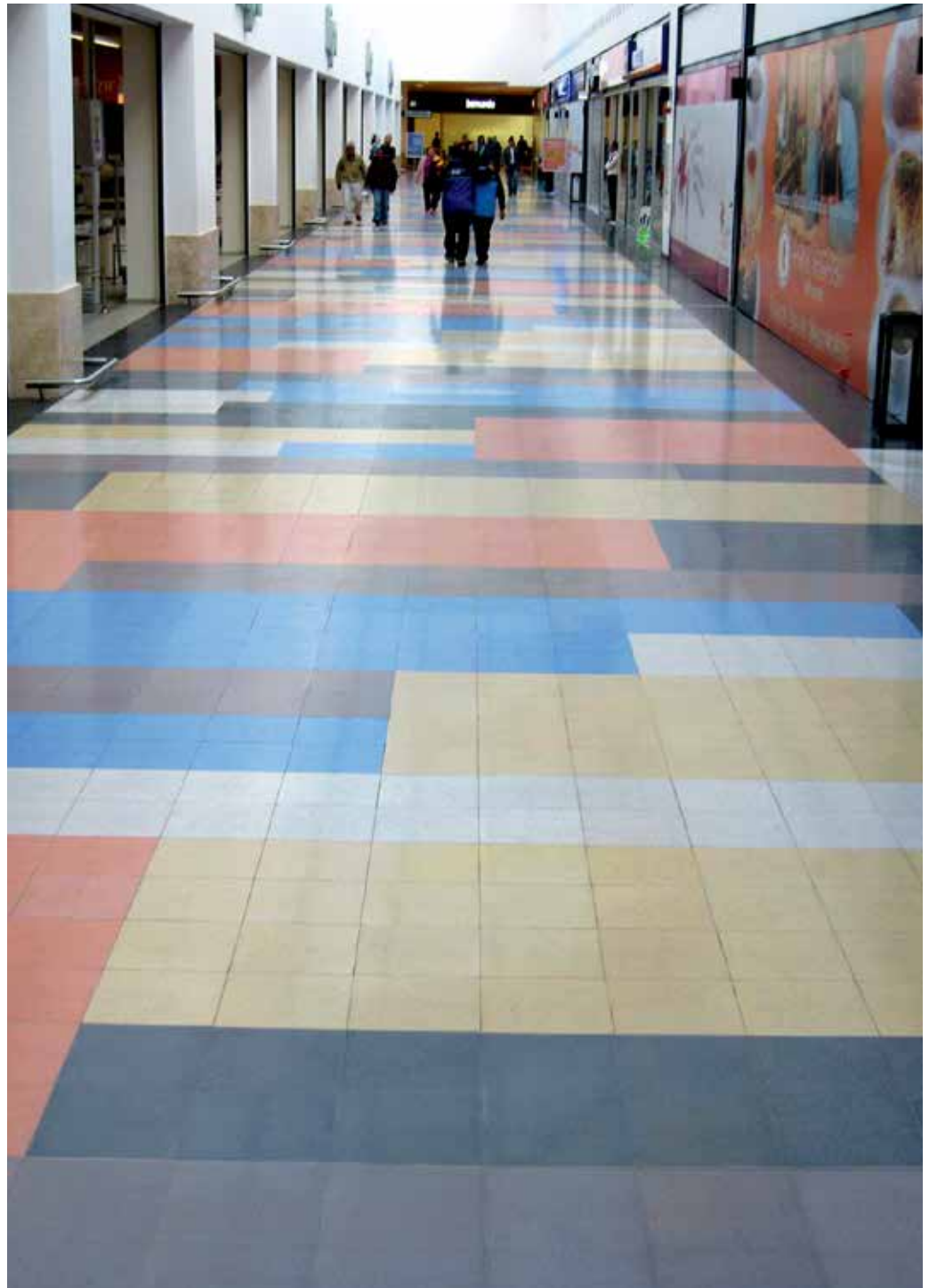
SA-762



SA-762-8-G

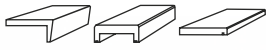


SA-643



## Glass Aggregate Terrazzo Tiles

Crushed glass aggregates in 0-30 mm sizes are bonded with 450 doses of cement and produced. The surfaces of terrazzo tiles used indoors are polished and honed. It can be produced in thousands of different colours. It does not contain chemical substances, is not harmful to health and is hygienic.



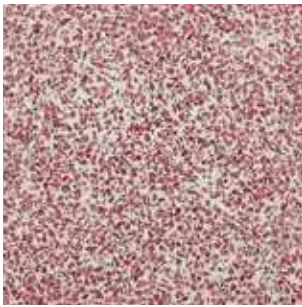
Stair steps, windowsills, capstone Plinth can be produced as a set with the selected product model.

### Surface Options (Slip and Skid Resistance)

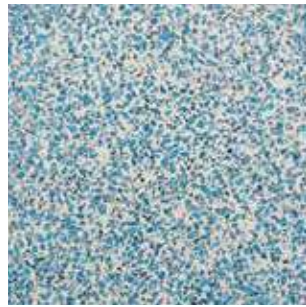
Polished (R9) - Honed (R9-R10)



## Glass Aggregate Terrazzo Tiles



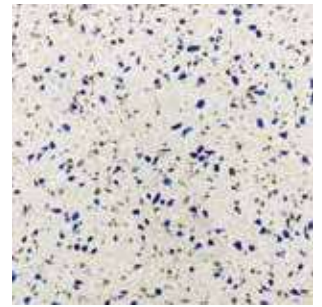
SA-964



SA-963



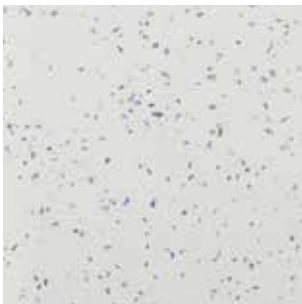
SA-968



SA-973



SA-965



SA-972



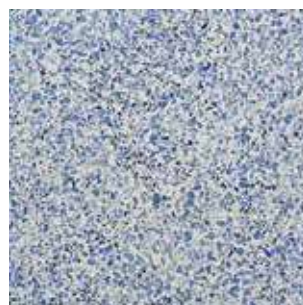
SA-969



SA-970



SA-971



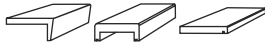
SA-966



SA-967

## Exterior Washbeton Terrazzo Tiles

For outdoor use, aggregate types such as marble, granite, quartz, basalt, andesite are bonded with cement and produced in two layers.



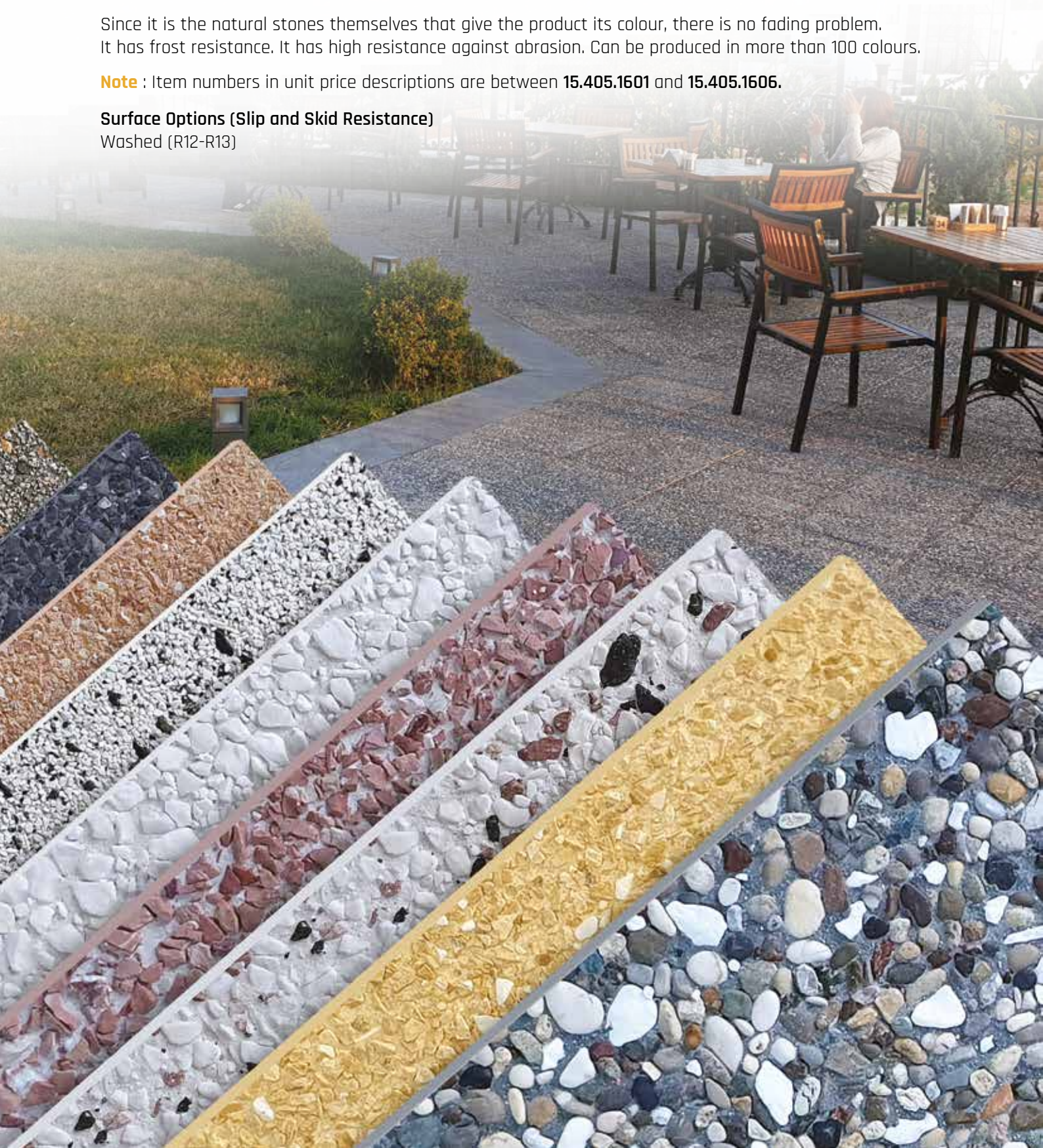
As a set with the selected product model, stair steps, Plinth, windowsills, capstone, flower bed, bench, table, dustbin and many auxiliary products can be produced.

Since it is the natural stones themselves that give the product its colour, there is no fading problem. It has frost resistance. It has high resistance against abrasion. Can be produced in more than 100 colours.

**Note :** Item numbers in unit price descriptions are between **15.405.1601** and **15.405.1606**.

### Surface Options (Slip and Skid Resistance)

Washed (R12-R13)

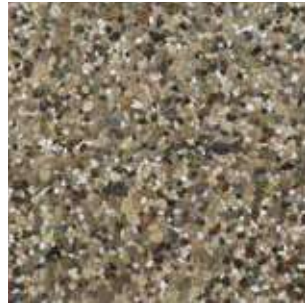


## Exterior Washbeton Terrazzo Tiles

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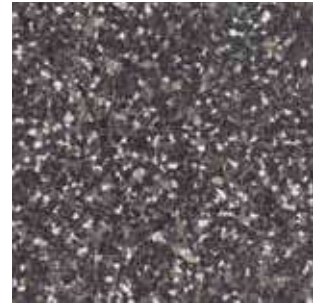
B-13



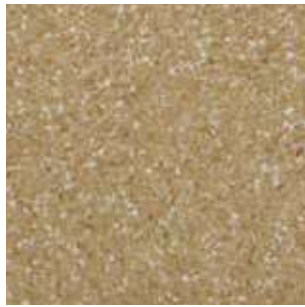
B-14



B-26



B-05



B-08



B-02



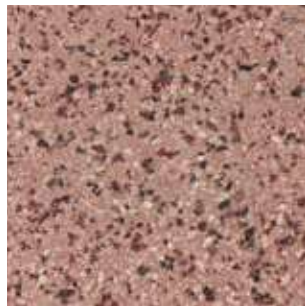
B-50



B-90



B-36



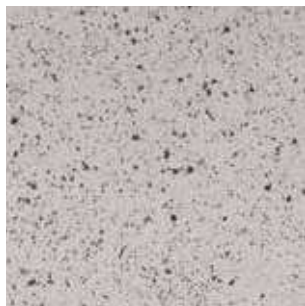
B-88



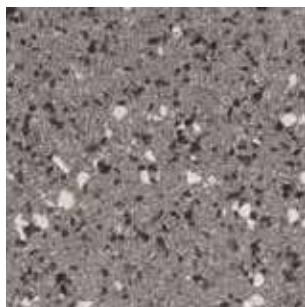
B-04



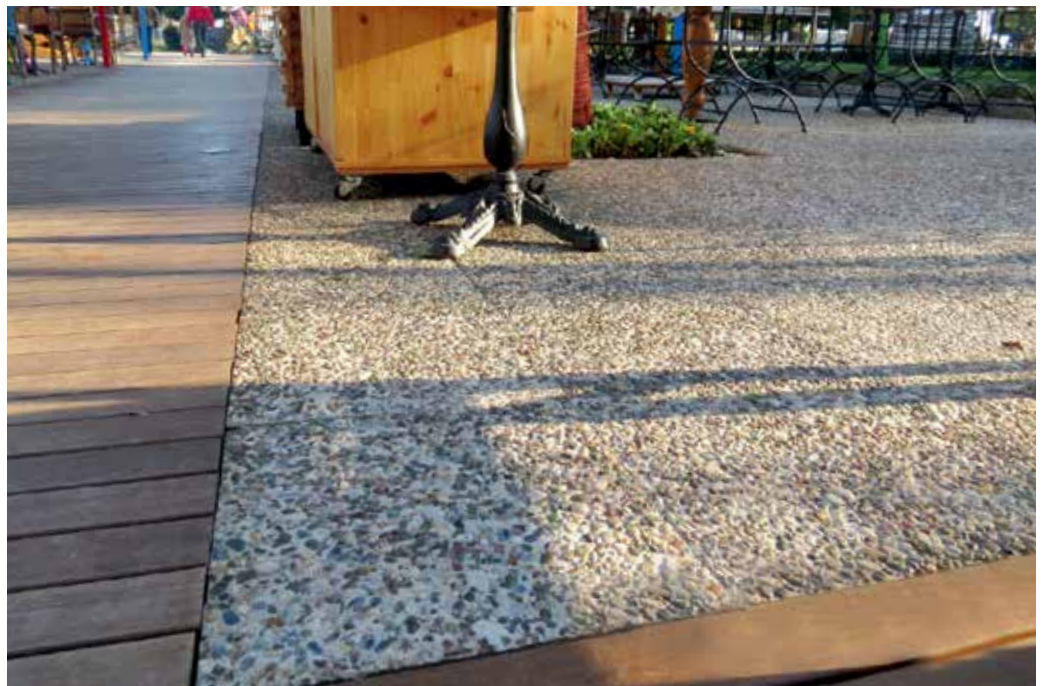
B-38



B-70



B-76

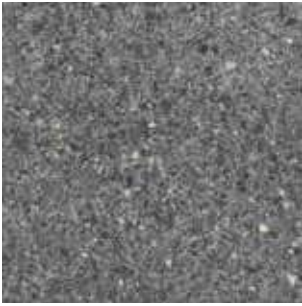


B-13



## Exterior Washbeton Terrazzo Tiles

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B-83



B-92



B-93



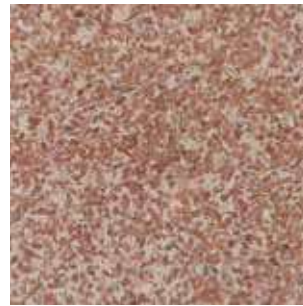
B-95



B-94



B-35



B-60



B-18



## Exterior Washbeton Other Products



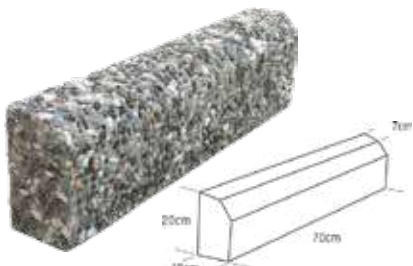
B-26 L STEP



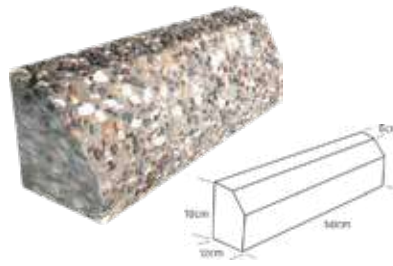
B-26 L CAPSTONE



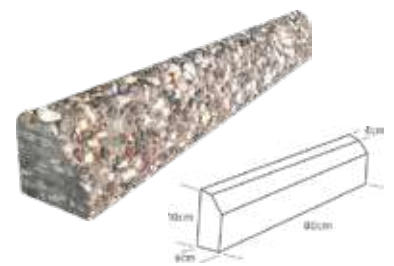
B-26 FLAT LATH



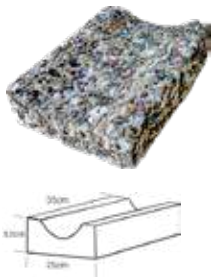
B-26 FLAT KERB -1



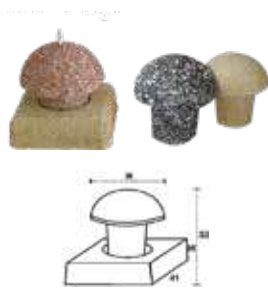
B-26 FLAT KERB -2



B-26 FLAT KERB -3



B-26 RAIN GUTTER



B-26 BORDER STONE / MUSHROOM



50X100cm  
H=6cm



50X50cm  
H=6cm



R= 50cm  
H=6cm

B-26 STEP STONES



# Exterior Pavement Flowerpots

Ready-made concrete flower beds are produced with wash concrete surface with colours suitable for the floor. Visible surfaces will be washbeton surface from the factory. It is iron reinforced.



**HEXAGONAL FLOWER BED**

Diameter: 70cm  
Yükseklik: 50cm



**CYLINDER FLOWER BED**

Diameter: 88cm  
Height: 80cm



**CIRCLE FLOWER BED**

Diameter: 70cm  
Height: 50cm



**RECTANGULAR FLOWER BED**

Short Side: 60cm  
Long Side: 100cm  
Height: 57cm



**ECLIPSE FLOWER BED**

Diameter: 145cm  
Height: 66cm



**RECTANGULAR FLOWER BED**

Short Side: 35cm  
Long Side: 100cm  
Height: 57cm



**WAVE FLOWER BED**

Short Side: 60cm  
Long Side: 100cm  
Height: 57cm



**HALF WAVE FLOWER BED**

Short Side: 60cm  
Long Side: 100cm  
Height: 57cm



**CARRIER LEG**

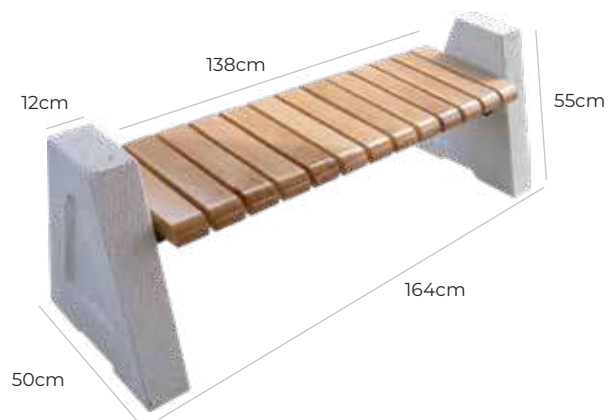
Diameter: 48cm  
Height: 33cm

# Park and Garden Benches

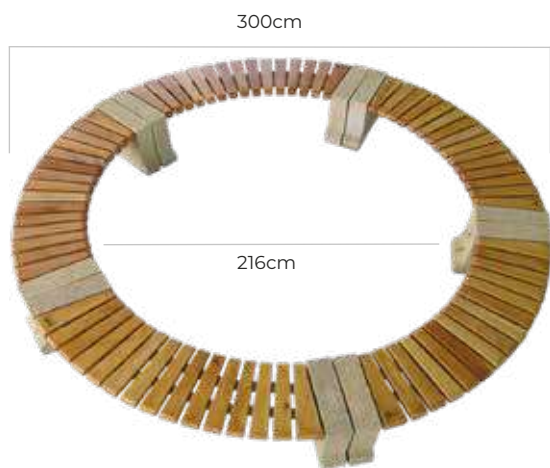
Carrier legs of the benches are made of washbeton and seating sections are made of impregnated wood. Foot colours can be produced from all washbeton tile colours.



**WB-01**



**WB-02**



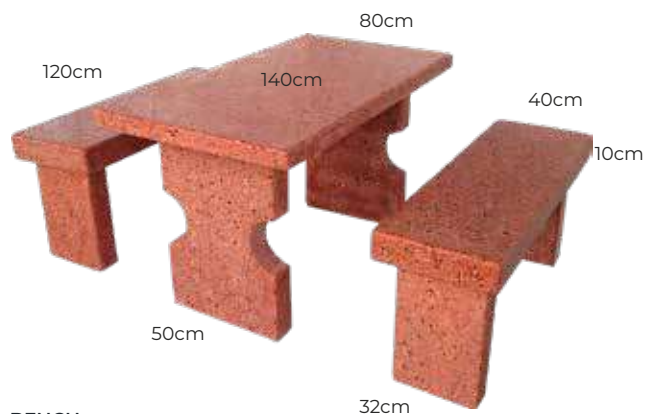
**WB-04**



**WB-05**



**WB-06**



**BENCH**  
Seat h = 55  
Table h = 80

## Exterior Pavement Terrazzo Tiles

Marble aggregates of 0-15 mm size are produced by bonding with cement. It can be produced in any colour.

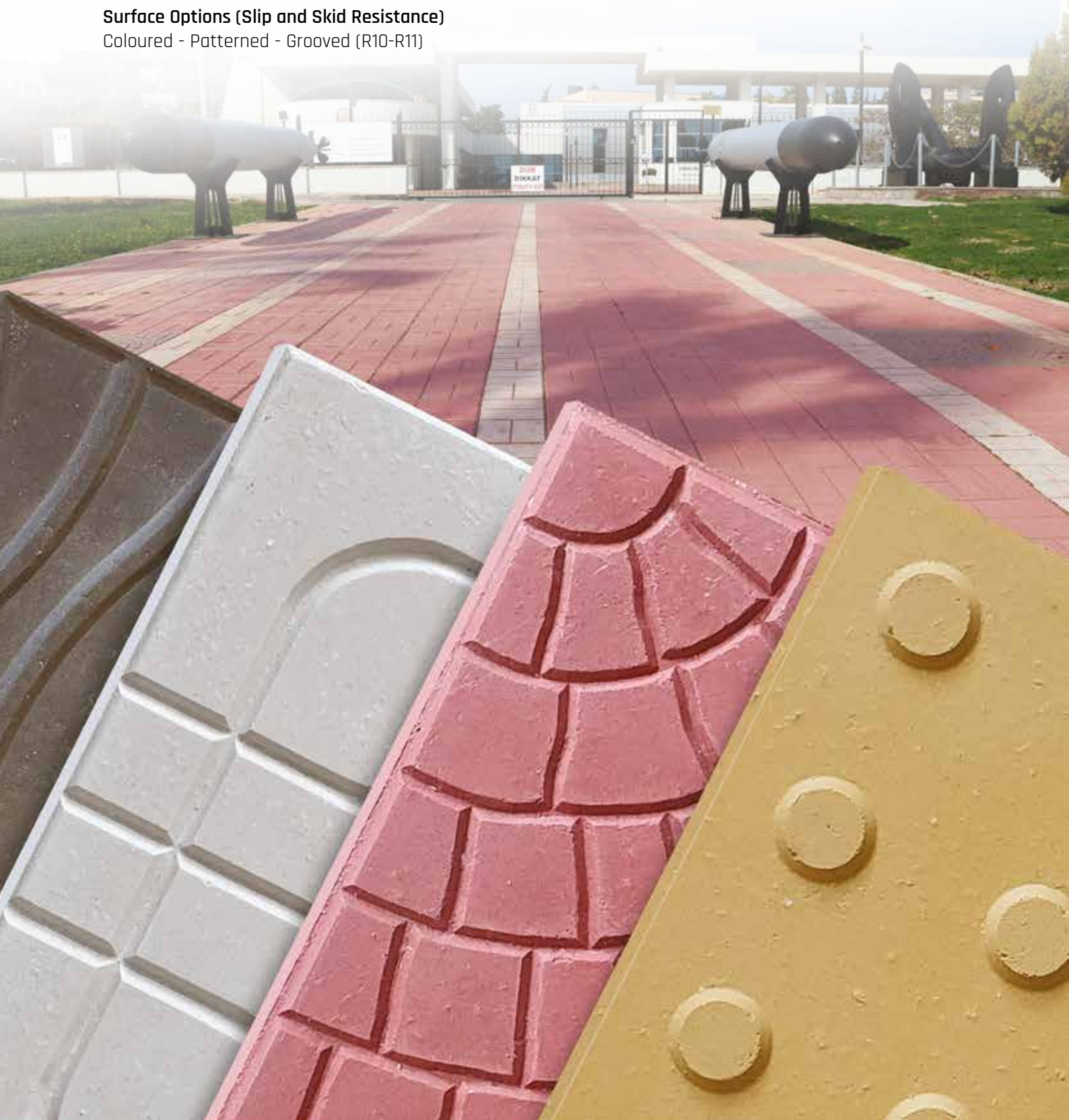
It has very high abrasion resistance. It is coloured using non-fading oxide dyes.

It is very resistant to impacts and does not wear out. The most preferred colours are red and grey.

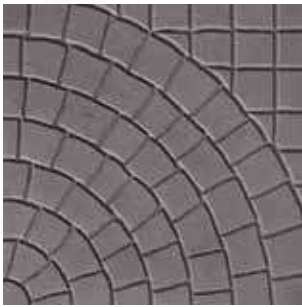
**Note** : Item numbers in unit price descriptions are between **15.405.1001** and **15.405.1006**.

### Surface Options (Slip and Skid Resistance)

Coloured - Patterned - Grooved (R10-R11)



## Exterior Pavement Terrazzo Tiles



T-1 BLACK



T-1 YELLOW



T-1 WHITE



T-1 RED



T-4 BLACK



T-4 YELLOW



T-4 WHITE



T-4 RED



T-5 BLACK



T-5 YELLOW



T-5 WHITE



T-5 RED



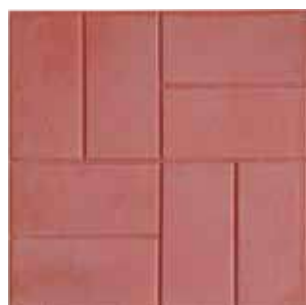
T-2 BLACK



T-2 YELLOW



T-2 WHITE



T-2 RED



T-3

# Exterior Pavementment Terrazzo Tiles



T-8 BLACK



T-8 YELLOW



T-8 WHITE



T-8 RED



T-17 BLACK



T-17 YELLOW



T-17 WHITE



T-17 RED



T-14 BLACK



T-14 YELLOW



T-14 WHITE



T-14 RED



T-18 BLACK



T-18 YELLOW



OTHER COLOR OPTIONS



T-5

## Exterior Perceivable Terrazzo Tiles



T-6



T-7



T-15



T-16



T-19



T-20



OTHER COLOR OPTIONS



# Exterior Quartz and Silica Aggregate Terrazzo Tiles

For exterior use, quartz aggregates are produced in 2 layers by bonding with high dose cement. Surface treatments that can be done for exterior use are matt, flat cut, sandblasting bush hammer, aren surfaces. Turkish Quartz has a hardness of 8 (Diamond has a hardness of 10).

**Outdoor Quartz / Silica** : Item numbers in unit price descriptions are between **15.405.1501** and **15.405.1506**.

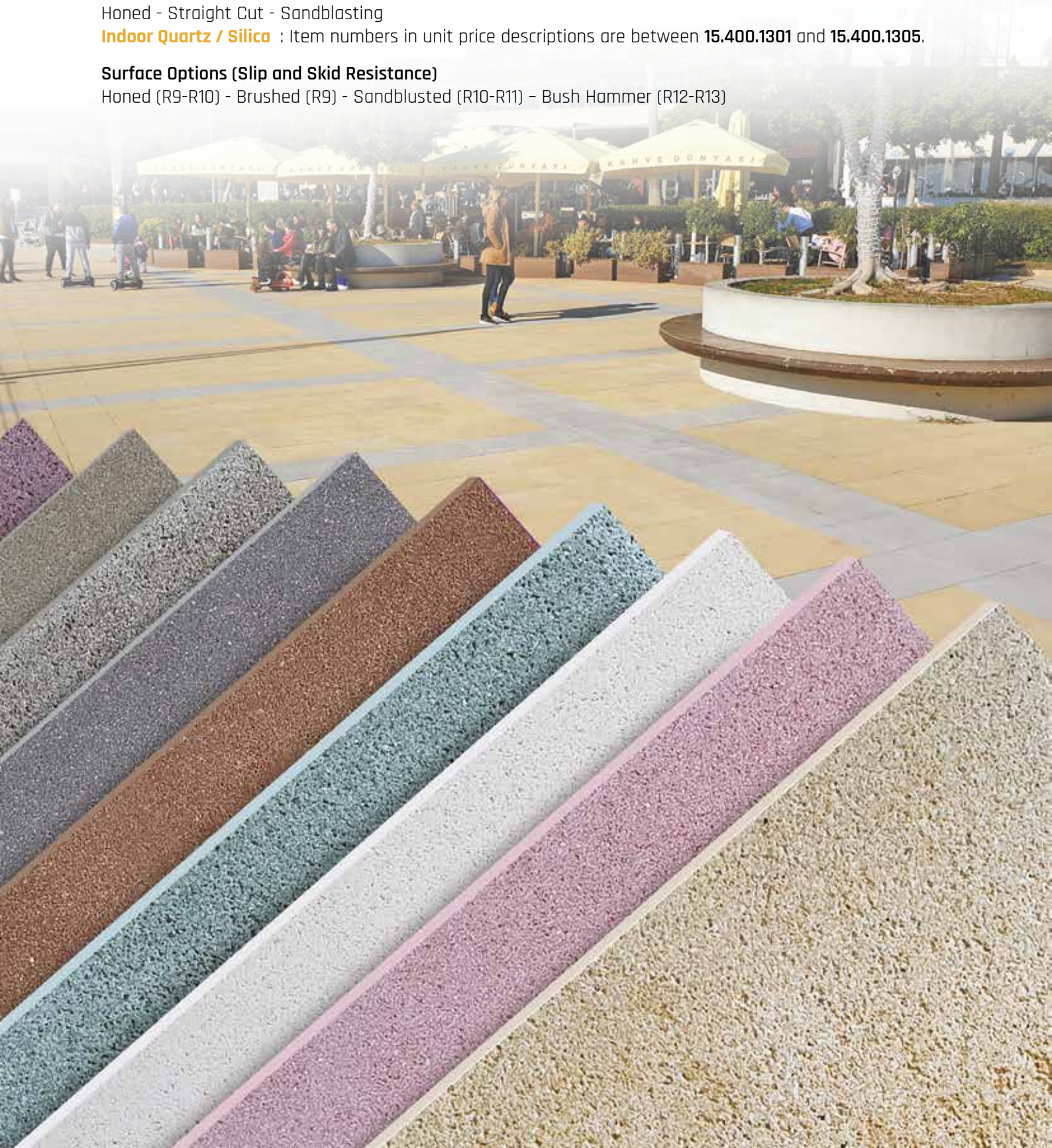
## Outdoor Surface Options

Honed - Straight Cut - Sandblasting

**Indoor Quartz / Silica** : Item numbers in unit price descriptions are between **15.400.1301** and **15.400.1305**.

## Surface Options (Slip and Skid Resistance)

Honed (R9-R10) - Brushed (R9) - Sandblusted (R10-R11) - Bush Hammer (R12-R13)



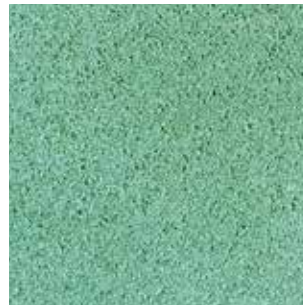
## Exterior Quartz and Silica Aggregate Terrazzo Tiles



GLX-4 QUARTZ



GLX-10 QUARTZ



GLX-6 QUARTZ



GLX-1 QUARTZ



GLX-3 QUARTZ



GLX-7 QUARTZ



## Exterior Silica Aggregate Terrazzo Tiles



GLX-4 SILICA



GLX-10 SILICA



GLX-3 SILICA



GLX-7 SILICA



GLX-6 SILICA



GLX-1 SILICA

## Interior Quartz / Silica Aggregate Terrazzo Tiles



GL-02-GRAY



GL-01-YELLOW



GL-04-WHITE

# Heat Resistant Terrazzo Tiles

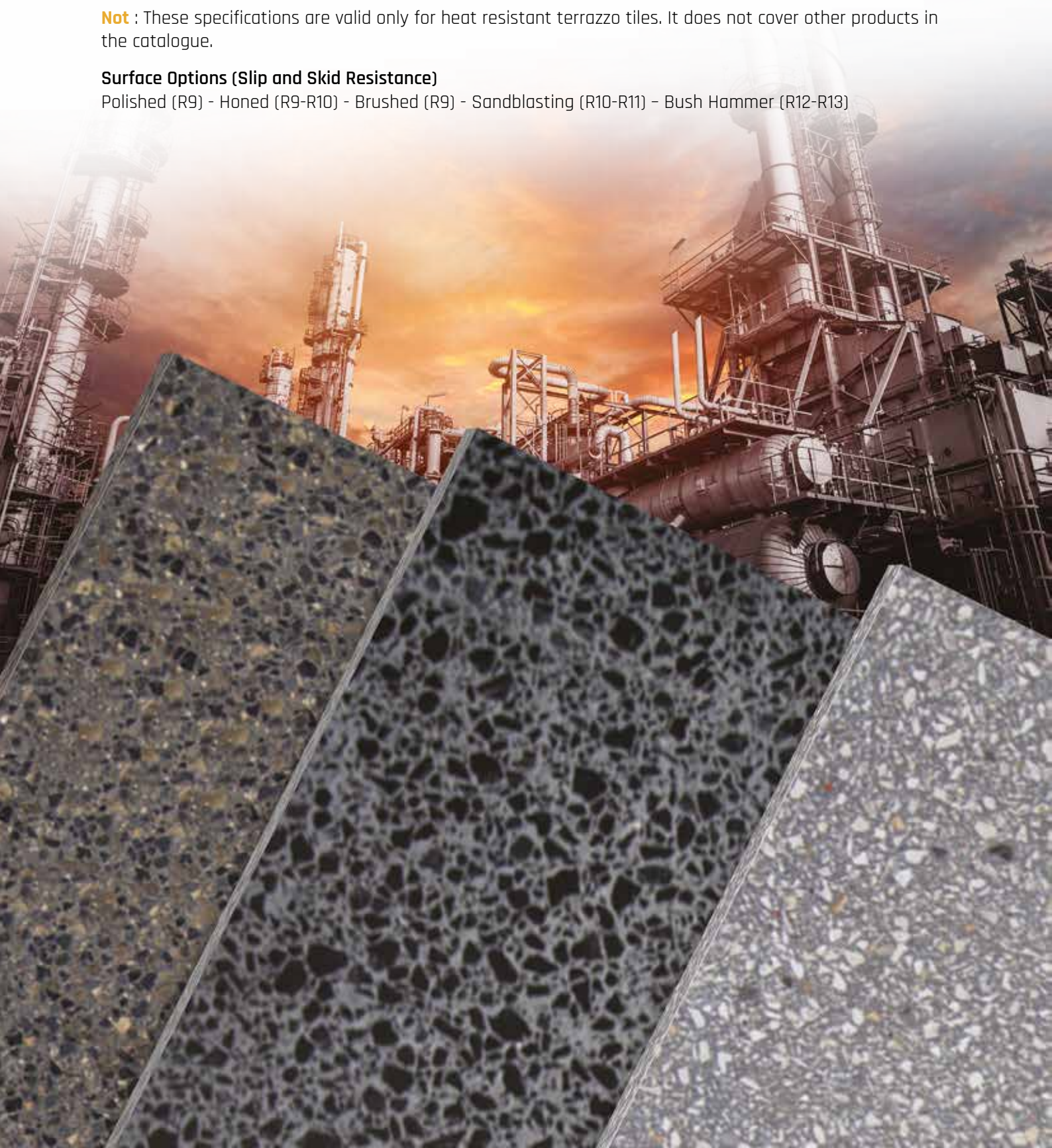
It is produced by bonding specially treated aggregates with high temperature resistant cement for indoor and outdoor use.

- Resistant to 1100 degrees celsius.
- Resistant to acids and bases with pH level 4 - 13.
- There are alternatives with high and low abrasion resistance.

**Not** : These specifications are valid only for heat resistant terrazzo tiles. It does not cover other products in the catalogue.

## Surface Options (Slip and Skid Resistance)

Polished (R9) - Honed (R9-R10) - Brushed (R9) - Sandblasting (R10-R11) - Bush Hammer (R12-R13)



## Heat Resistant Terrazzo Tiles

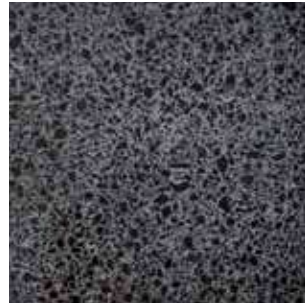
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SA - 728



SA - 729



SA - 730



# Exterior Marble and Granite Aggregate Terrazzo Tiles

For exterior use, marble aggregates are produced by bonding with 450 doses of cement. Final surface treatment is done according to the desired surface. Surface treatments that can be done for exterior use are arena, flat cutting, tumbling and bush hammer. It can be produced in hundreds of different colours. There are 1600 different models in our current colour chart. It does not contain chemical substances, is not harmful to health and is hygienic.



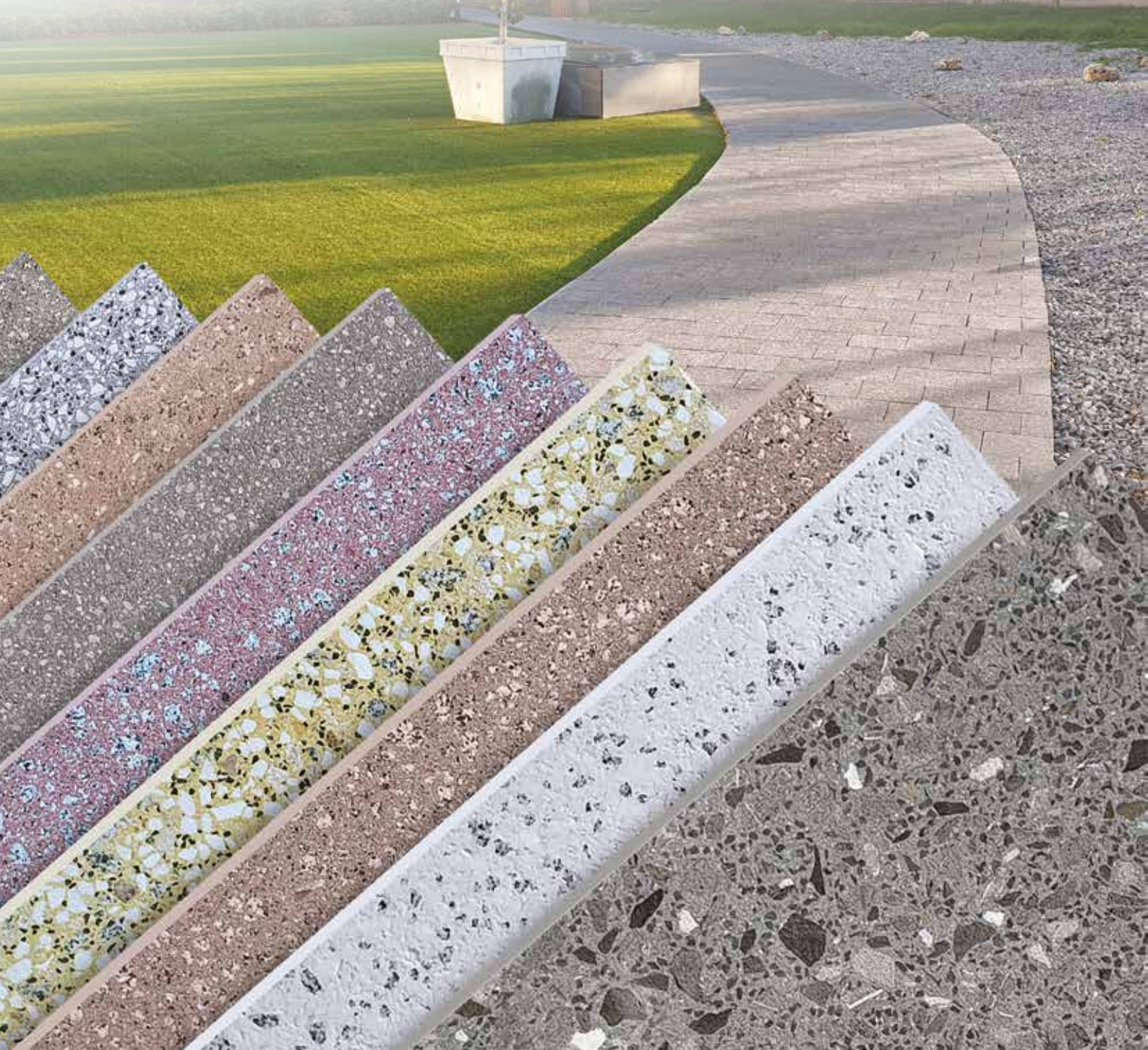
Stair steps, windowsills, capstone Plinth can be produced as a set with the selected product model.

**Marble Aggregate:** Turkish item numbers in unit price descriptions are between **15.405.1101** and **15.405.1106**.

**Granite Aggregate:** Item numbers in the unit price descriptions are between **15.405.1201** and **15.405.1206**.

## Surface Options (Slip and Skid Resistance)

Brushed (R9) - Sandblasting (R10-R11) - Bush Hammer (R12-R13)



## Exterior Marble and Granite Aggregate Terrazzo Tiles

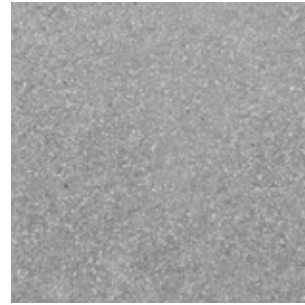
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ASOS-763



ASOS-840



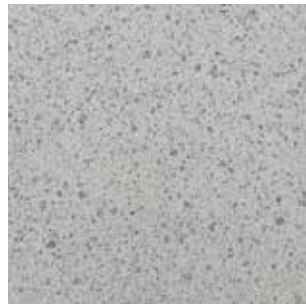
ASOS-929



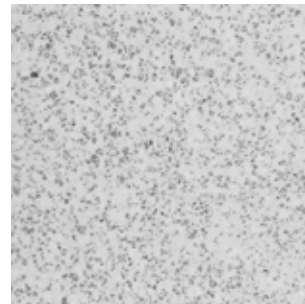
ASOS-930



ASOS-708



ASOS-683



ASOS-500



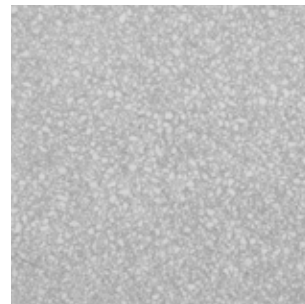
ASOS-712



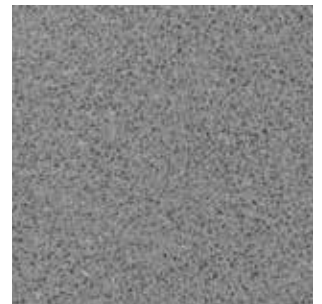
ASOS-15



ASOS-686



ASOS-766



ASOS-357



ASOS-505-2



ASOS-627-1



ASOS-627



ASOS-759



ASOS-228



ASOS-783



ASOS-933



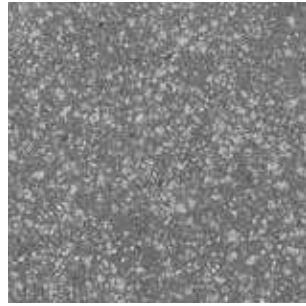
ASOS-08

## Exterior Marble and Granite Aggregate Terrazzo Tiles

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ASOS-857-5



ASOS-857-6



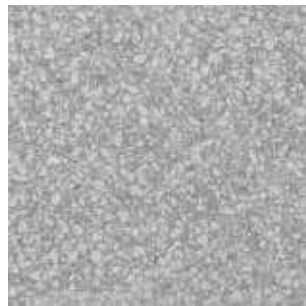
ASOS-785



ASOS-857



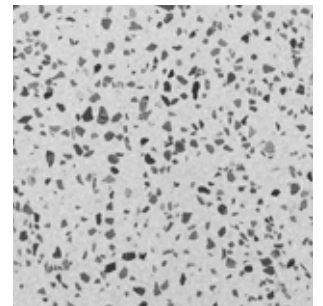
ASOS-975



ASOS-798



ASOS-772



ASOS-879



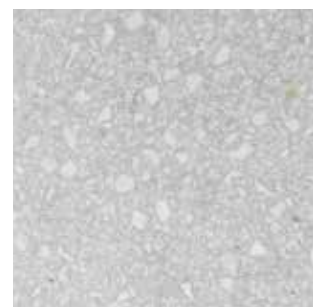
ASOS-2000



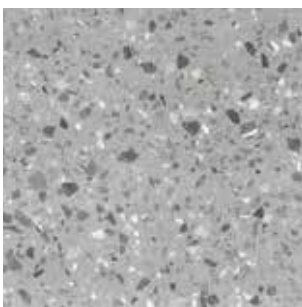
ASOS-2001



ASOS-2002



ASOS-778



ASOS-865-1



ASOS-256



ASOS-859

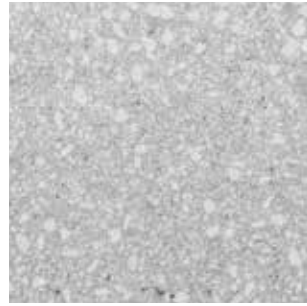


ASOS-23

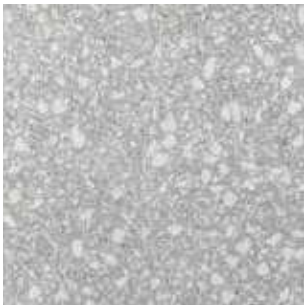
## Exterior Marble and Granite Aggregate Terrazzo Tiles



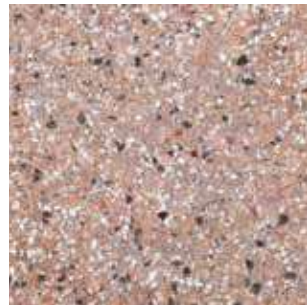
MUC-500



MUC-783



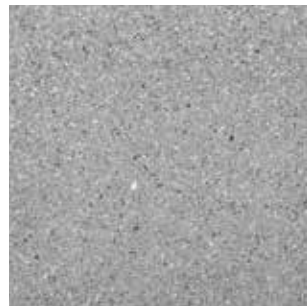
MUC-778



MUC-23



MUC-786



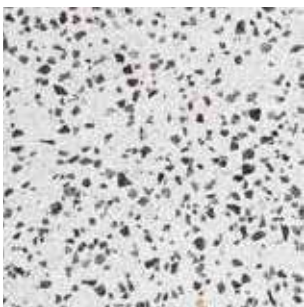
MUC-857-2



MUC-394



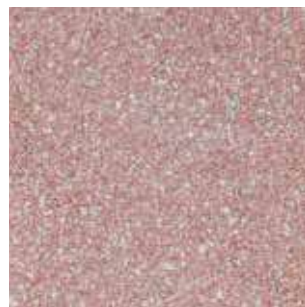
MUC-22



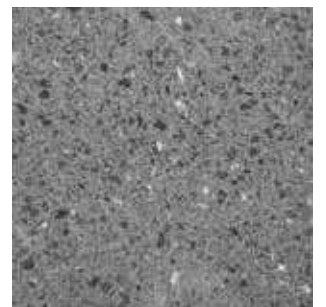
MUC-879



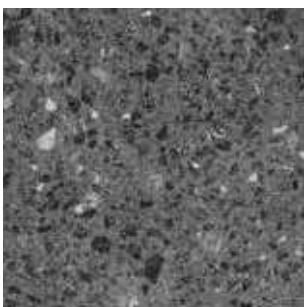
MUC-708



MUC-686



MUC-363



MUC-865-1



MUC-772



MUC-780



MUC-889



# Exterior Basalt and Andesite Aggregate Terrazzo Tiles

It is produced by bonding basalt and Andazite aggregates with 400 - 450 doses of cement. Surface treatments that can be done for outdoor use are honed, arena, flat cut, brushed, bush, bush hammer and wash concrete hardness is higher than normal marbles. For this reason, products made with basalt and andesite mosaics have higher strength. In addition, polished production can be made for interior spaces..

- Terrazzo basalt and andesites have a more stable strength than natural cut products.
- Weak veins found in natural basalt and andesite are not found in terrazzo. For this reason, no deformation occurs on the product surface.

**Basalt Aggregate:** Item numbers in the unit price descriptions are between **15.405.1401** and **15.405.1406**.

**Andesite Aggregate:** Item numbers are between **15.405.1301** and **15.405.1306** in unit price specifications.

## Surface Options (Slip and Skid Resistance)

Honed (R9-R10) - Brushed (R9) - Sandblusted (R10-R11) - Bush Hammer (R12-R13) - Washed (R12-R13)



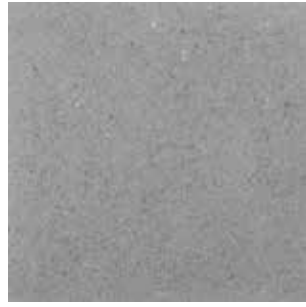
Stair treads, windowsills, capstone, Plinth boards can be produced as a set with the selected product model.



## Exterior Basalt and Andesite Aggregate Terrazzo Tiles



ASOS-854



DÜZ SA-854



ASOS-854-1



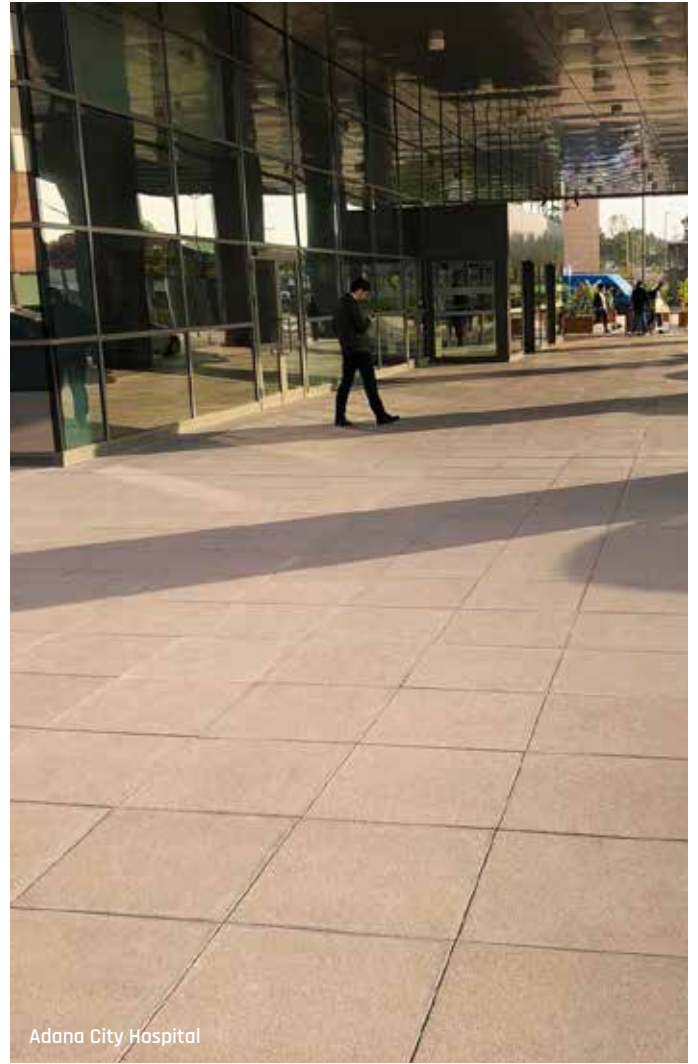
DÜZ SA-854-1



ASOS 854- 3



DÜZ SA- 854- 3



# Raised Tiling System

All models you will like in As Karo are suitable for raised flooring with **60x60x3cm**, **40x40x3cm** sizes, polished, honed, sandblasted, brushed, bush hammer and wash concrete surface options.

## Surface Options (Slip and Skid Resistance)

Polished (R9) - Honed (R9-R10) - Brushed (R9) - Sandblasting (R10-R11) - Bush Hammer (R12-R13)



## Application Type

- The application starts from any corner in the space.
- Depending on the stability of the coating material, it is placed in the dimensions of 60x60, 30x60 and 40x40.

## Drop Ball Test\*



50x50x3 Marble



50x50x3 Granite

## Technical Specifications

- Insulation (electricity, heat and sound)
- Flexibility and impact resistance
- Resistance to atmospheric conditions
- Water repellency
- UV resistance
- High load resistance

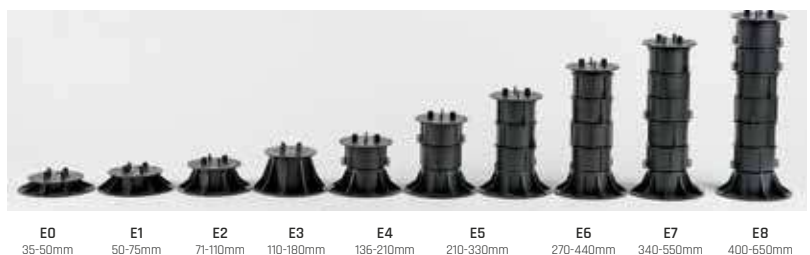


60x60x3 AS KARO Raised Flooring

\* It is a test performed by releasing a 2 kg steel ball from a height of 150 cm. For the video of the test, scan the **QR Code below on your phone.**

## Usage Quantities Consumption

Flooring Cassette Sizes	m <sup>2</sup> / Piece
40x40cm	7,8
50x50cm	5
40x60cm	5
60x60cm	3,8



E0 35-50mm E1 50-75mm E2 71-110mm E3 110-180mm E4 135-210mm E5 210-330mm E6 270-440mm E7 340-550mm E8 400-650mm



Assembly Example



Application Example



Assembly Example



Application Example



## Precast Stair Steps

Ready-made equipped stair treads are produced by bonding one or more of 0 - 25 mm marble, granite, andazite, basalt and quartz-silica aggregates with portland cement with a strength of 450 doses and above. Our products are compressed with ribbed (min. 5 mm) iron reinforcements in special moulds by vibration and produced as a single piece.

While the desired surface treatment is applied to the visible surfaces of the stair treads are produced in 4 cm thickness. While the desired surface treatment is applied to the outer surfaces, cutting and shaving is done in order to make the thickness of the inner surfaces equal. For Rotary stairs, measurements are taken from the construction site for each step. Special molds are made for each of the measurements taken and produced by the method described above.

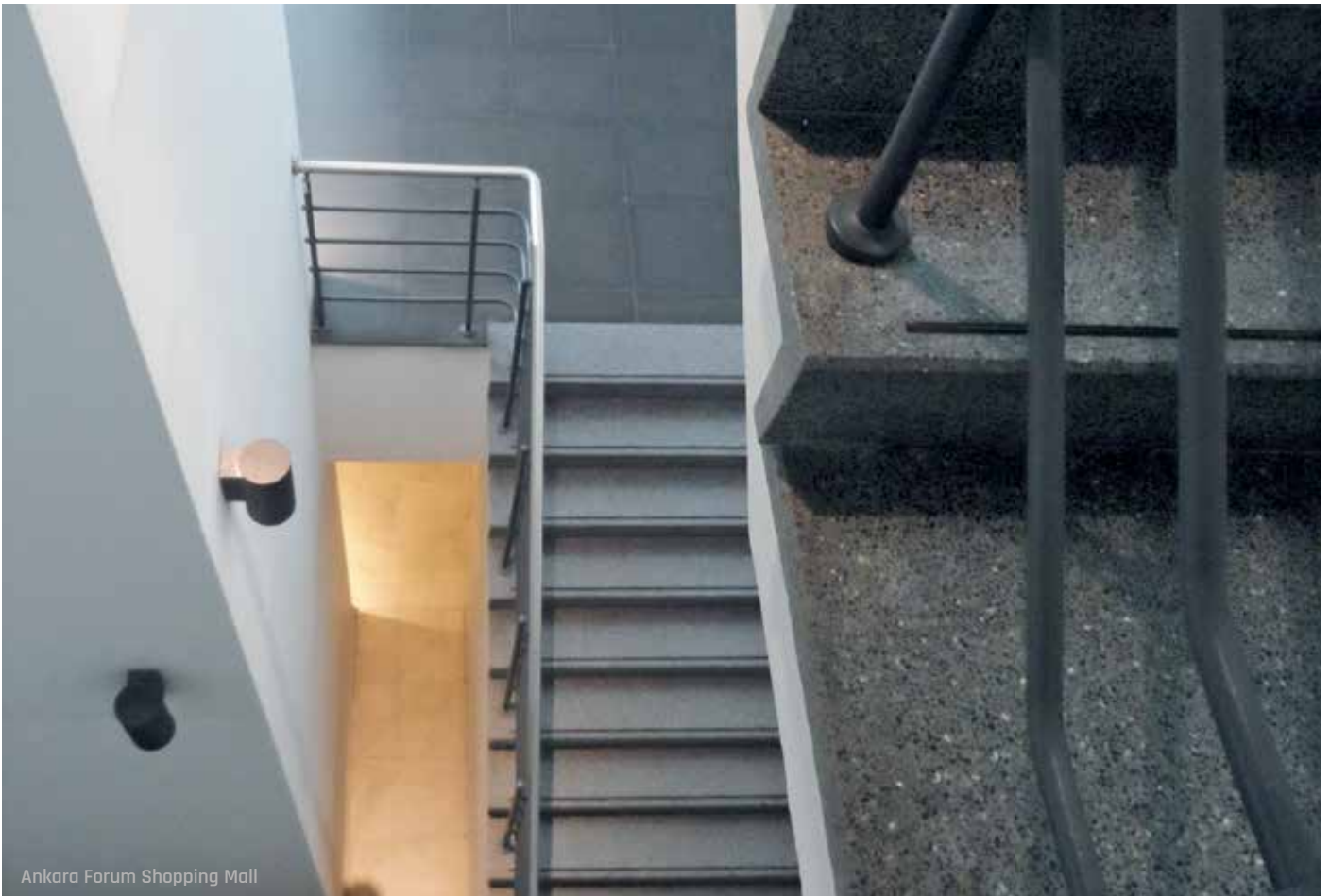
- L Stairs
- L Flat Stairs
- Flat Stairs
- Rotary Stairs

**Flat Shaped** : The exposure numbers of terrazzo stair treads in the unit price specifications are between **15.430.1001** and **15.430.1005**.

**Miter Shaped** : Terrazzo stair treads in unit price specifications are between **15.430.1101** and **15.430.1105**.

### Surface Options (Slip and Skid Resistance)

Brushed (R9) - Honed (R9-R10) - Aged (R9) - Sandblasting (R10-R11) - Bush Hammer (R12-R13)



# Stair Treads Precast

L STAIR

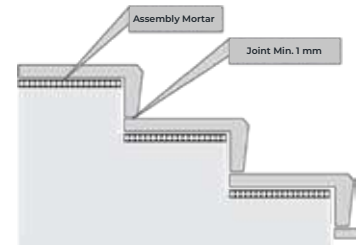


L COLD FRAME



L PLINTH

L STAIR INSTALLATION DETAIL



L FLAT STAIR

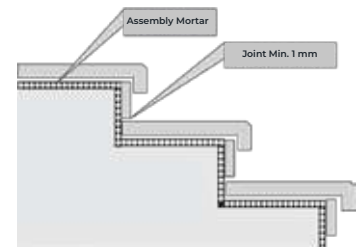


L-COLD REAM



L SKIRTING

L STAIR INSTALLATION DETAIL



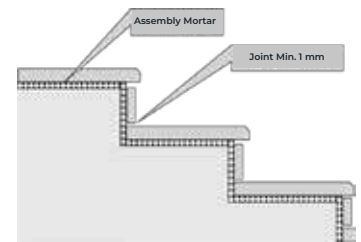
FLAT STAIR



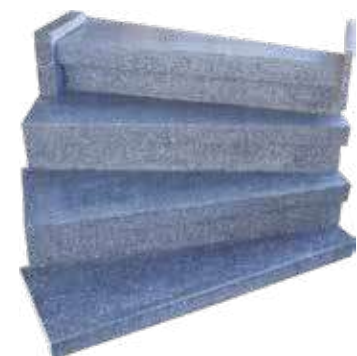
FLAT SKIRTING



FLAT STAIR INSTALLATION DETAIL



ROTARY STAIR



# Precast Stair Steps

The front and side view of the block steps are 10 cm thick in terms of shape. However, its net thickness is 4,5 cm. It can be produced with any type of surface treatment by bonding with iron reinforced, 450 doses of cement.

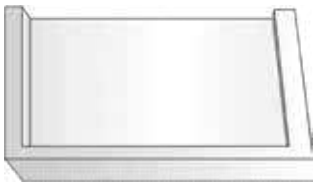
## Surface Options (Slip and Skid Resistance)

Polished (R9) - Honed (R9-R10) - Brushed (R9) - Sandblasting (R10-R11)

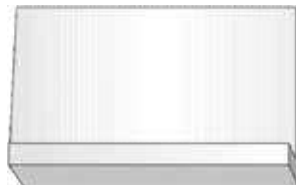
BLOCK STAIR



LANDING LATHS



2 Short 1 Long Side Enclosed Block Step



1 Long Side Enclosed Landing Lath



1 Short 1 Long Side Enclosed Block Step



1 Short Side Enclosed Landing Lath



1 Short Side Enclosed Landing Lath



Flat Laths



Mersin Terrace Atlas

## Stair and Tile Accessories Plinth Boards and Anti-Slip Bands

Plt is produced at the desired height, 16-20 mm thick in 3 types (flat cut, beveled and polished on flat cut).

**Note:** Turkish Item in unit price descriptions is **15.405.1701**.

### L Skirting

It is produced at a height suitable for terrazzo tile Plinth in the existing area, L-shaped, at the same angle with the horizontal and vertical angles of the step to be applied, in the same colour, with fibre additives. The apparent surfaces come out of the factory polished

**Note:** Item number in unit price descriptions is **15.430.1201**

### L-Shaped Stair Cold Frame

It is produced as L-shaped with a minimum thickness of 4 cm, at the same angle with the horizontal and vertical angles of the currently applied step, in the same colour, with fibre reinforced. The apparent surfaces are sent polished from the factory

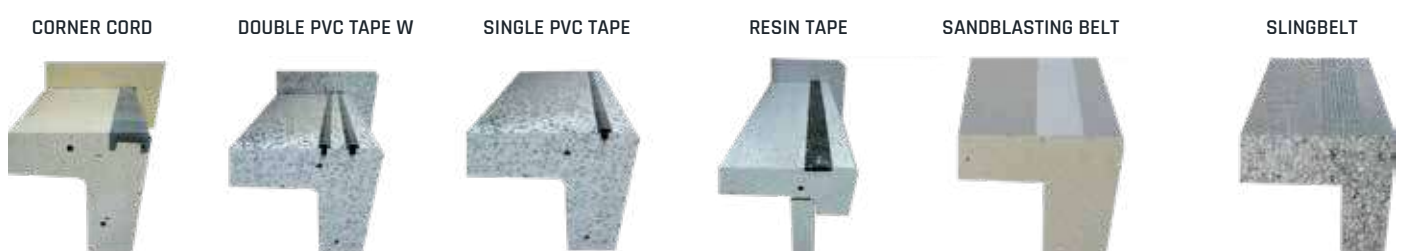
## Tile Plinth Boards



## Anti-Slip Bands

It is applied 3-4 cm inside 3-4 cm from the point where the step part of the step meets the forehead with an average width of 4 cm. Apart from the standard production of the steps, it is extra treated. Provides non-slipping feature.

**Note:** Pose numbers in unit price descriptions are between **10.240.5401** and **10.240.5412**





# Windowsill - Parapet - Capstones

In precast parapet copings, sills and edge corner coverings are produced as single layer in special molds with ribbed (min 5mm) iron reinforcement by bonding with 0-25 mm crushed marble, granite, basalt, andazite, quartzaggregates and 450 doses of portlant cement.

It is compacted by vibration. The apparent parts are machined according to the desired surface. The wall thickness of The invisible parts are cut and shaved to be even in thickness.

For exterior use, a dropper channel can be opened.

It can be produced in the same colour and texture with the existing flooring and stair colour.

Turkish item number in the unit price descriptions of flat capstones is between **15.430.1301 - 1304.**

L-Shaped capstone's pos number in the unit price descriptions is between **15.430.1401 - 1404.**

Number in unit price tariffs of U shaped capstones is between **15.430.1501 - 1504.**

## Surface Options (Slip and Skid Resistance)

Polished (R9) - Honed (R9-R10) - Brushed (R9) - Sandblasting (R10-R11)

FLAT CAPSTONE



L CAPSTONE



U CAPSTONE



CORNER CAPSTONE



FLAT WINDOWSILL



L WINDOWSILL



U CAPSTONE



PLATFORM EDGE ELEMENT EDGE,  
CORNER COVERINGS



Depth: 30-50 cm  
Height: 20-30 cm  
Length: 80 cm

WATER CONDUIT



1 : 8x18x18 cm L =100 cm  
2 : 8x18x8 cm L =100 cm



Flat Capstone Sample



U Capstone Sample



U Capstone Sample



L Capstone Sample



L Capstone Sample

## Application Samples

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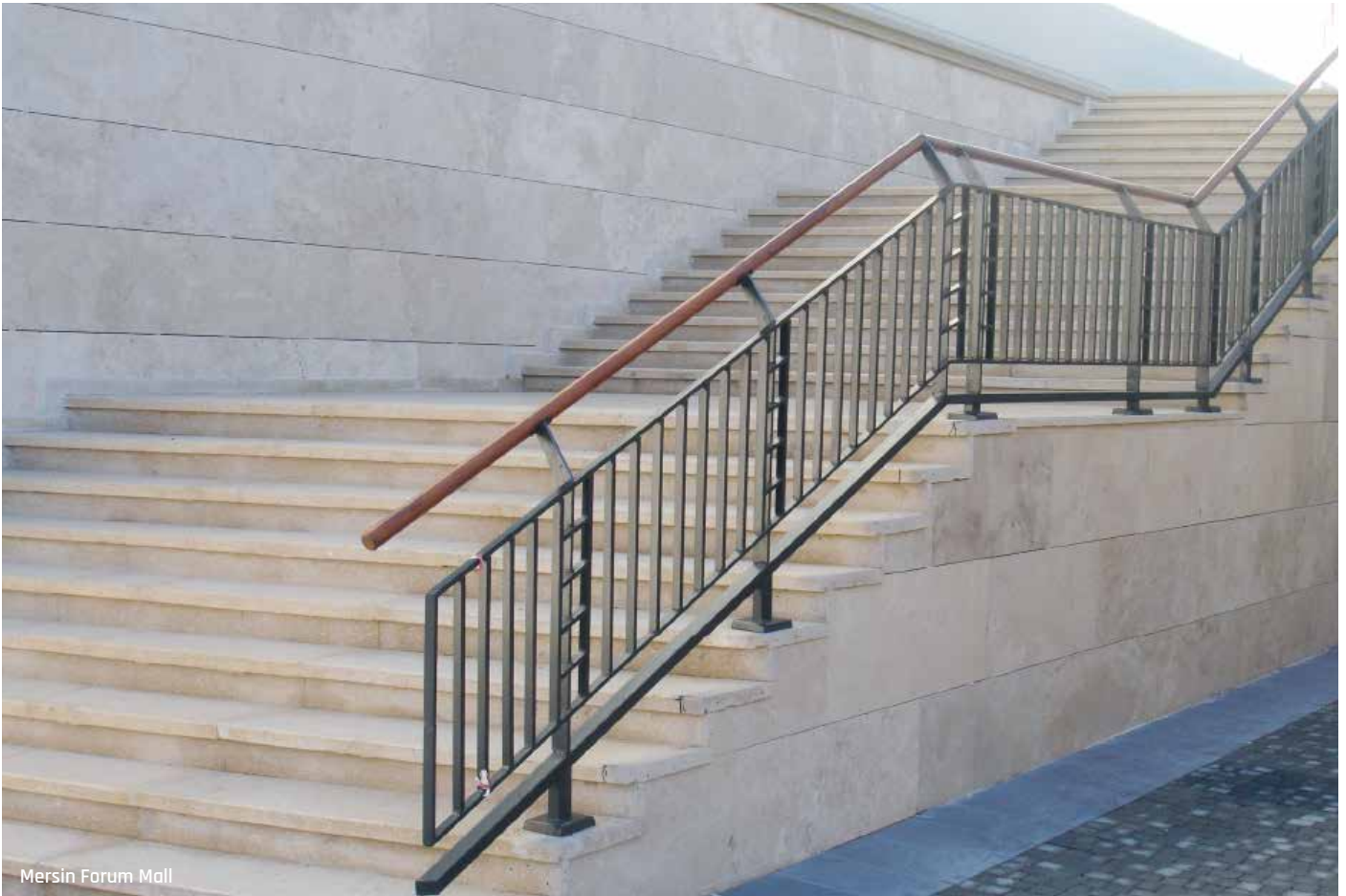
## Application Samples



İskenderun State Hospital



NEF 163



Mersin Forum Mall

## Application Samples

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Saya Park Mall



Antalya EXPO



Georgia

Application Samples



Mersin Atlas Teras



Mersin Atlas Teras



Mersin Atlas Teras

## Application Samples



Saya Park



Çarşıbaşı Kayseri



Çarşıbaşı Kayseri

## Application Samples





References



## References



Kayseri - Peşkur Nuts Shop



Kayseri - Peşkur Nuts Shop



Kayseri - Peşkur Nuts Shop



Kayseri - Peşkur Nuts Shop

## References



Kirşehir Police Academy



Kirşehir Police Academy



Yozgat Yusuf Ziya Primary School



Police Academy

## References



Elit Yarn Factory



Dogan Textile Yarn Factory



Çimsa



Elit Yarn Factory

## References

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## References



Küçükçekmece Atakent Park - İstanbul



Küçükçekmece Atakent Park - İstanbul



Küçükçekmece Atakent Park - İstanbul



Savaş Park Avm

## References

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Sayapark Mall



Sayapark Mall

## References

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Mersin Atatürk Park



Tarsus Bus Terminal



Sayapark AVM



## References

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Berdan Park



Saya Park Mall



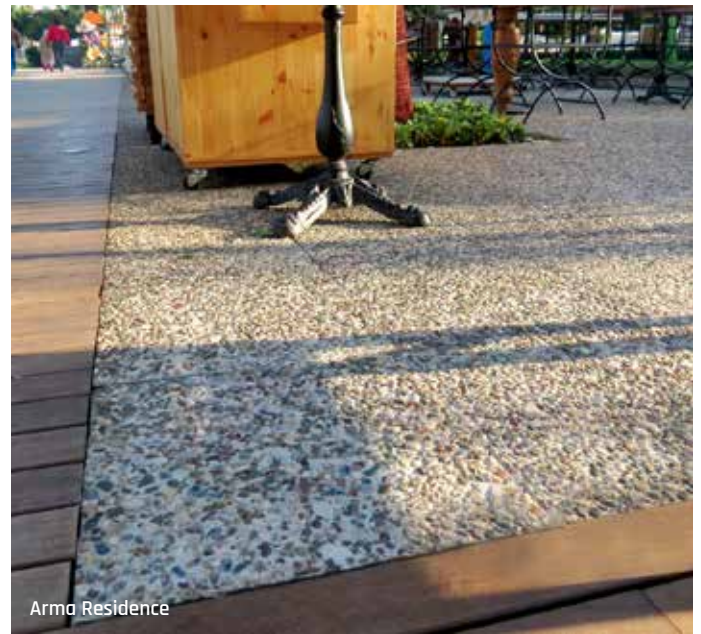
Arma Residence

## References



## References

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## References

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## References

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Ted Hatay College



Tarsus Wedding Hall



Tarsus American College

## References



Mersin Servet Tazegül Olympic Swimming Pool



Gaziantep Şehitkamil Municipality Park



TED College Antakya

## References



Mersin Sea Museum



Mersin Pozcu



Mersin Pozcu



24 Kasim Primary School

## References

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Antalya Expo Tramway



Antalya Expo Tramway



Antalya Expo Tramway



References



Altinoran



Altinoran



Altinoran



Altinoran

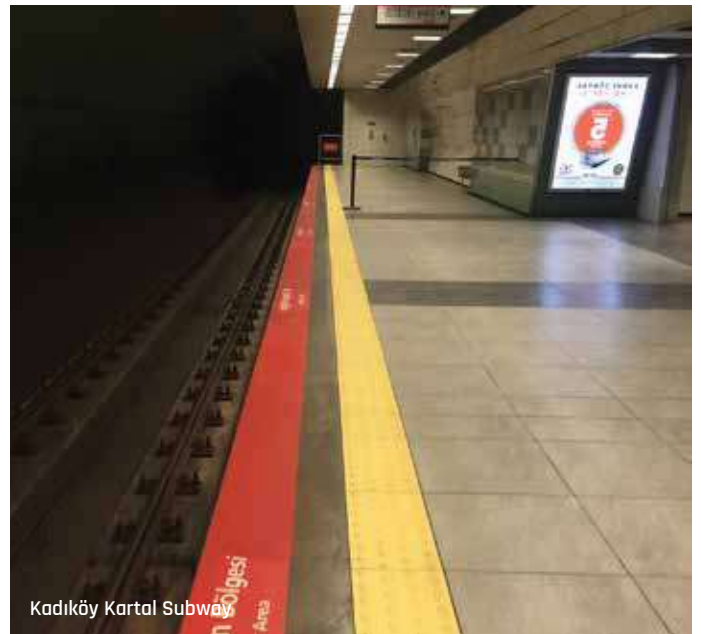
## References



Kadıköy Kartal Subway



Kadıköy Kartal Subway



Kadıköy Kartal Subway



Kadıköy Kartal Subway

## References From Australia

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## References From France

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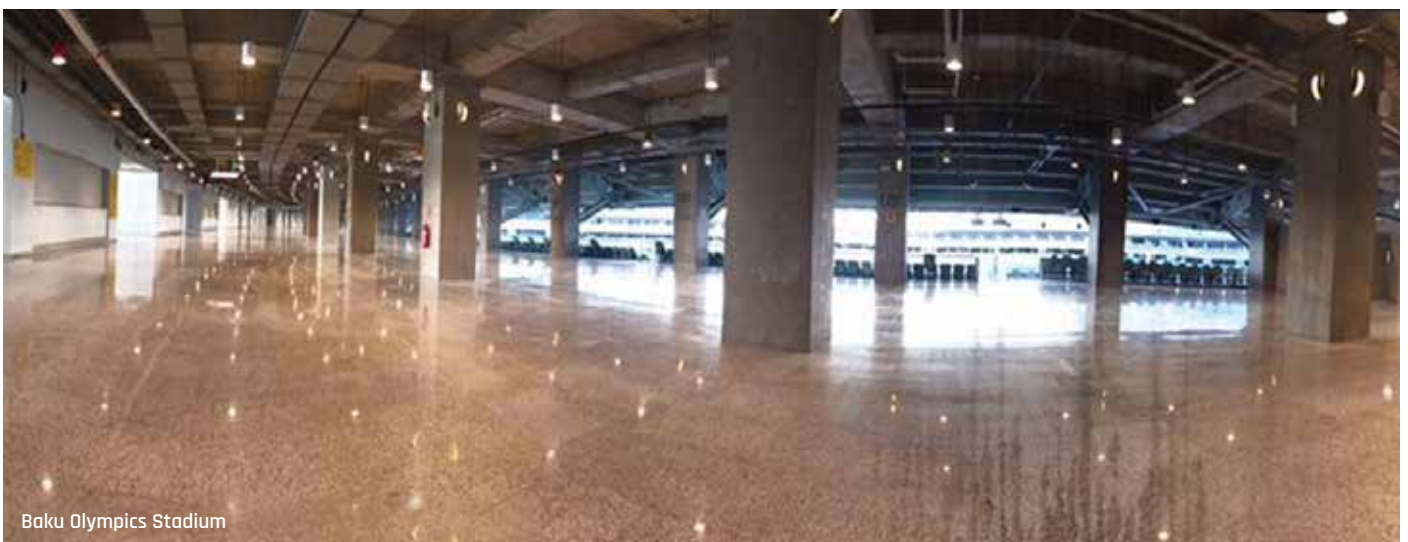


## References From Azerbaijan

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Baku Olympics Stadium



Baku Olympics Stadium

## References From Germany

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Germany Residence



Germany Residence



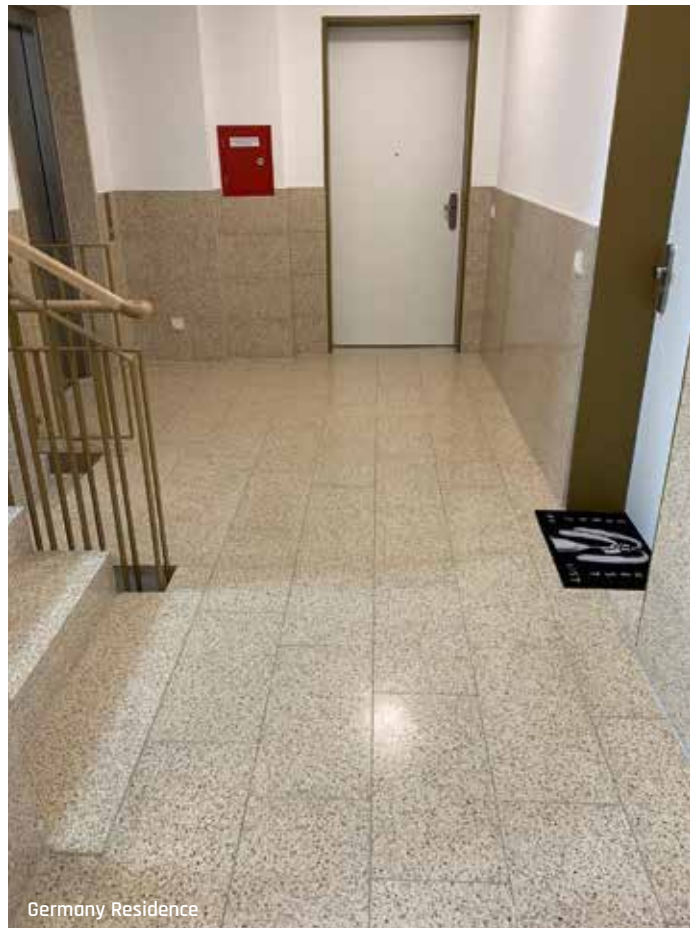
Germany Residence



Germany Residence

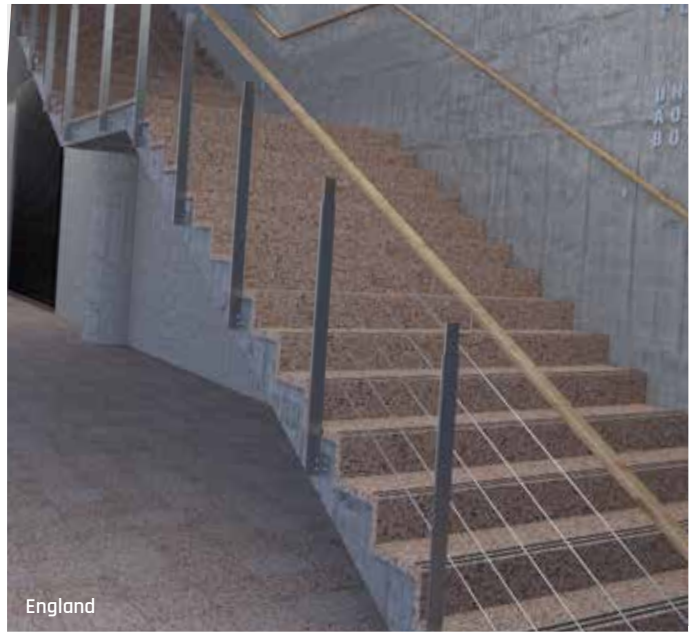
## References From Germany

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## References From England

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References From Israel



## References From Israel



References From South Africa



## References From Maldives

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## References From Bulgaria

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## Our Main Foreign References

Project Name	Country
ALİBEY MALDIVES HOTEL PROJECT	MALDIVES
DEALERSHIP	QATAR
DEALERSHIP	AUSTRALIA
CASPIAN WATER PROOF PROJECT	AZERBAIJAN
ASHGABAT AIRPORT	TURKMENISTAN
DEALERSHIP	FRANCE
GEORGIA HOTEL	GEORGIA
DEALERSHIP	ISRAEL
DEALERSHIP	ENGLAND
DEALERSHIP	GREECE
SYDNEY MALL PROJECT	AUSTRALIA
LAL GARDENS	AZERBAIJAN
BAKU OLYMPIC STADIUM	AZERBAIJAN
DEALERSHIP	AUSTRALIA
HOUSING PROJECT	NORWAY
HOUSING PROJECT	AFGHANISTAN
DEALERSHIP	IRELAND
DEALERSHIP	IRAQ
MASS HOUSING PROJECT	IRAQ
RIXOS HOTEL	RUSSIA
ADDİS ABABA AIRPORT	ETHIOPIA
AL FATAH UNIVERSITY	LIBYA
SMOLENSK HOSPITAL	RUSSIA
BEYTA PROJECT 1ST STAGE	LIBYA
SİRTE CONSTR. OF 100 HOUSING UNİTS	LIBYA
AL FATAH UNIVERSITY PROJECT MEDIA 1-2	LIBYA
TRIPOLI EYE HOSPITAL	LIBYA
MOSQUE	KUWAIT
ERCAN AIRPORT	T.R.N.C
DEALERSHIP	GERMANY

# Our Main Domestic References

	Project Name	City
Subways and Train Lines	MARMARAY 108 SUBWAY STATIONS ANTALYA EXPO TRAM 14 STATIONS STATIONS BAYRAMPAŞA SUBWAY STATIONS İKİTELLİ SUBWAY STATIONS SABİHA GÖKÇEN SUBWAY STATIONS DUDULLU BOSTANCI SUBWAY STATIONS BURSA TRAM LINE YOZGAT HIGH SPEED TRAIN LINE SIVAS HIGH SPEED TRAIN LINE	İSTANBUL ANTALYA İSTANBUL İSTANBUL İSTANBUL İSTANBUL BURSA YOZGAT ANKARA
Hospitals	MERSIN CITY HOSPITAL KARTAL LÜTFİ KIRDAR STATE HOSPITAL ADANA CITY HOSPITAL ADANA ORAL AND DENTAL HEALTH HOSPITAL HATAY 750 BED STATE HOSPITAL ISPARTA CITY HOSPITAL	MERSIN İSTANBUL ADANA ADANA HATAY ISPARTA
Airports	ISTANBUL 3RD AIRPORT SABİHA GÖKÇEN AIRPORT ATATÜRK AIRPORT GAZİANTEP AIRPORT BODRUM AIRPORT ERCAN AIRPORT CUKUROVA REGIONAL AIRPORT	İSTANBUL İSTANBUL İSTANBUL GAZİANTEP MUĞLA KKTG MERSİN
Shopping Centres	ANKARA OPTİMUM MALL İSTANBUL MECİDİYEKÖY MALL TEPE PRIME TAURUS MALL FORUM MALL (ANKARA - DİYARBAKIR - MERSİN) ADANA PARK MALL NİDAPARK SEYRANTEPE SHOPPING CENTRE	ANKARA İSTANBUL ANKARA MERSİN ADANA İSTANBUL İSTANBUL
Housing and Residences	NEF -3-8-12-13-14-22-25-39-98 ANKARA PARKMOZAIK RESIDENCE BORSA TOWERS RİTİM İSTANBUL - VADİ İSTANBUL	İSTANBUL ANKARA İSTANBUL İSTANBUL
Factories	SUNSET-ARVEN FACTORIES SAMSUNG KIRIKKALE FACTORY ALGIDA FACTORY SASA FACTORY BİFA BISCUIT FACTORY ANI BISCUIT FACTORY ELİT YARN FACTORY	KIRKLARELİ KIRIKKALE KONYA ADANA KARAMAN KARAMAN OSMANIYE
Public Organisations	İPKB - 35 SCHOOLS SCHOOLS ISTANBUL PRIME MINISTRY SERVICE BUILDING ADANA REGIONAL JUDICIAL COURT CONSTRUCTION OF RECEPTION CENTRES ASELSAN KONYA WEAPON FACTORY CANAKKALE BRIDGE ANKARA İNCEK U16 GENDARMERIE FACILITY PAVEMENT RENOVATION WORKS	İSTANBUL İSTANBUL ADANA İSTANBUL KONYA ÇANAKKALE ANKARA MERSİN
Hotels	SHERATON HOTEL HİLTON GARDEN INN ELA HOTEL CLUB ALİ BEY GREEN PARK HOTEL	ADANA İSTANBUL ANTALYA ANTALYA GAZİANTEP

# Technical Information

## Packaging and Shipment

Below are the tables containing pallet, transport and packaging information for Terrazzo tiles in As Karo's standard sizes.

STANDARD PALLET PACKAGING and SHIPPING INFORMATION (cm)						
Terrazzo Tile Dimensions (cm)	1 m <sup>2</sup> Weight (kg)	Pallet Dimensions (cm)	How many m <sup>2</sup> is loaded on 1 pallet	20 DC Container (max according to 25 Tonnes Weight) how many m <sup>2</sup> can be loaded	20 DC Container (single row max according to volume) how many m <sup>2</sup> can be loaded	Materials Used in Packaging
30x30x1,8	45 kg	90x120	38,88 m <sup>2</sup>	555,56 m <sup>2</sup>	388,80 m <sup>2</sup>	Pallet Styrofoam Circle Bracket Stretch Wood Lath
33x33x1,8	45kg	100x200	35,28 m <sup>2</sup>	555,56 m <sup>2</sup>	211,68 m <sup>2</sup>	
40x40x1,9	50kg	80x120	34,56 m <sup>2</sup>	526,32 m <sup>2</sup>	518,40 m <sup>2</sup>	
40x40x3,0	75kg	80x120	20,16 m <sup>2</sup>	333,33 m <sup>2</sup>	302,40 m <sup>2</sup>	
30x60x2,2	55kg	90x120	27,00 m <sup>2</sup>	454,55 m <sup>2</sup>	216,00 m <sup>2</sup>	
30x60x2,9	75kg	90x120	22,68 m <sup>2</sup>	344,83 m <sup>2</sup>	181,44 m <sup>2</sup>	
30x80x2,2	55kg	80x120	24,00 m <sup>2</sup>	454,55 m <sup>2</sup>	360,00 m <sup>2</sup>	
30x80x2,9	75kg	80x120	20,16 m <sup>2</sup>	344,83 m <sup>2</sup>	302,40 m <sup>2</sup>	
60x60x2,2	55kg	60x120	18,00 m <sup>2</sup>	454,55 m <sup>2</sup>	216,00 m <sup>2</sup>	
60x60x2,9	75kg	60x120	15,12 m <sup>2</sup>	344,83 m <sup>2</sup>	181,44 m <sup>2</sup>	
80x60x2,2	55kg	80x120	24,00 m <sup>2</sup>	454,55 m <sup>2</sup>	360,00 m <sup>2</sup>	
80x60x2,9	75kg	80x120	20,16 m <sup>2</sup>	344,83 m <sup>2</sup>	302,40 m <sup>2</sup>	

CAGE PALLET PACKAGING and SHIPPING INFORMATION (cm)							
Terrazzo Tile Dimensions (cm)	1 m <sup>2</sup> Weight (kg)	Cage Pallet External Dimensions W/L/H (cm)	Cage Pallet Internal Dimensions W/L/H (cm)	How many m <sup>2</sup> is loaded on 1 pallet	20 DC Container (max according to 25 Tonnes Weight) how many m <sup>2</sup> can be loaded	20 DC Container (single row max according to volume) how many m <sup>2</sup> can be loaded	Materials Used in Packaging
30x30x1,8	45 kg	75x135x80	65x125x65	23,04	555,56 m <sup>2</sup>	276,48 m <sup>2</sup>	Pallet Plastic Rod Circle Bracket Wood Lath Cardboard Box
33x33x1,8	45 kg	95x135x80	85x125x65	33,33	555,56 m <sup>2</sup>	266,64 m <sup>2</sup>	
40x40x1,9	50 kg	95x135x100	85x125x85	36,48	526,32 m <sup>2</sup>	291,84 m <sup>2</sup>	
40x40x3,0	75 kg	95x135x100	85x125x85	25,60	333,33 m <sup>2</sup>	204,80 m <sup>2</sup>	
30x60x2,2	55 kg	75x135x80	65x125x85	18,72	454,55 m <sup>2</sup>	224,64 m <sup>2</sup>	
30x60x2,9	75 kg	75x135x80	65x125x85	14,40	344,83 m <sup>2</sup>	172,80 m <sup>2</sup>	
30x80x2,2	55 kg	95x135x80	85x125x85	24,96	454,55 m <sup>2</sup>	199,68 m <sup>2</sup>	
30x80x2,9	75 kg	95x135x80	85x125x85	19,20	344,83 m <sup>2</sup>	153,60 m <sup>2</sup>	
60x60x2,2	55 kg	75x135x80	65x125x85	18,72	454,55 m <sup>2</sup>	224,64 m <sup>2</sup>	
60x60x2,9	75 kg	75x135x80	65x125x85	14,40	344,83 m <sup>2</sup>	172,80 m <sup>2</sup>	
80x60x2,2	55 kg	95x135x80	85x125x85	24,96	454,55 m <sup>2</sup>	199,68 m <sup>2</sup>	
80x60x2,9	75 kg	95x135x80	85x125x85	19,20	344,83 m <sup>2</sup>	153,60 m <sup>2</sup>	

## Skirting Measurement, Thickness and Weight Information

Dimension (cm)	Weight/Mtul
80x6x2,7	4,00 kg/mtl
60x6x2,7	4,00 kg/mtl
40x6x1,8	2,70 kg/mtl
33x6x1,6	2,40 kg/mtl
30x6x1,6	2,40 kg/mtl



The information in the tables are approximate. Loading capacities are adjusted during transport and can be increased or decreased depending on the legal carrying capacity of lorries and trucks.



## Technical Data

### Pallet Options



Standard Pallet

Cage + Boxed Pallet

Precast Pallet

Bundle Pallet

## Technical Data Assembly

### Recommendations on Transport and Storage

- Products are prepared for shipment in pallets. They are tied with strip straps to prevent dispersion during shipment.
- Protect the edge corners and surface quality during application and transport.
- The fact that the treated surfaces of the products are adhered to each other, ensures the protection of the surface.
- Stack the tile pallets in a single row. If it is necessary, stack up to 2 rows in narrow areas. Stack precast products such as steps in a single row.
- Vehicles must be unloaded using a forklift, if not possible, they must be stacked face to face vertically
- The most suitable vehicle for unloading the products brought to the construction site is forklift. There is deformation in the products when unloading with a crane or rescuer. Care must be taken. When unloading, it must be lifted, transported and unloaded parallel to the ground. The lowered place must be clean and flat
- In horizontal and vertical transports, the products should be stacked vertically and wooden slats should be placed between vertical spaces
- In horizontal and vertical transports, utmost care should be taken for edge and corner smoothness. It should not be transported and placed on treated surfaces and edges, especially on the steps. Otherwise, breakages at edges and corners are inevitable
- When lowering the pallets to the ground, regardless of the vehicle you use, the ground should be flat and the pallets should be lowered slowly and parallel to the ground.
- The waiting period of the tiles in palletized form is 2-3 months. If they are kept longer, visual colour differences may occur on the product surfaces. For this reason, it should not be kept for more than 1-2 months. If it will be kept waiting, written approval must be obtained from the manufacturer
- Keeping the products in the field longer than recommended causes capillary cracks in fine grained black and grey coloured products. These products should be installed within 15-20 days after reaching the site at most.

### Warnings Regarding Use and Cleaning

- "SALT" should NOT be used for defrosting. Salt will definitely damage the product
- Non acidic chemical liquid can be used for defrosting. However, a letter must be obtained from the manufacturer, stating that it will not damage cement-based concrete slabs
- The products to be used for cleaning must not contain acid and acid-containing chemicals. It should not contain lpsa, salt and caustic (detergent derivatives). Otherwise, it will cause deformation on the surface. All acidic products damage the cement component, reducing its strength and deforming the surface.
- Sawdust should never be used to protect the polish. Sawdust will cause stains if it gets wet
- Soft soap should be used as a general cleaning material. Cleaning water should be changed frequently
- In case of contamination, immediately clean the surface with a cleaning liquid that is suitable for dirt, does not contain acid, is not a detergent derivative and has biodegradable nature and rinse with plenty of water
- Get approval from As Karo before using synthetic polishes that you intend to use externally on the surface
- Henkel products or equivalent products can be used for cleaning and maintenance of the products. The authorities should be asked for help about the material to be used and pilot applications should be requested if necessary
- Whatever the product you will use for any purpose (cleaning, polishing, preventing stain absorption, defrosting), a written guarantee should be requested from the manufacturer-supplier company of the product to be used that the product will not damage cement-based materials.
- Wheel selection of the trolleys used between the machines, such as in spinning mills, should be done well. Soft textured wheels that will not damage the tile surface should be used. (Large diameter, wide width and soft textured wheels should be used).

## Technical Information

### Issues And Warnings To Be Considered During Tile Installation

- The area to be coated should be cleaned and humidified.
- Preparation of mortar material: It should be dry blended with 2 parts of portland cement, 8 parts of sifted sand or crushed stone or sand mixture with a 0-5 mm sieve range, and the prepared mixture should be diluted part by part and used. The diluted mixture should be consumed within 15-20 minutes. The mixture should be 400 dosage. You can increase the dosage of the mortar material by using less sand or gravel if you wish.
- There should be no mortar gap under the Terrazzo Tiles during installation. These gaps usually occur at the junctions of the tiles in 2 corners or 4 corners. The reason is the trowel movement made by the flooring master to clean the edge of the tile during installation. The gaps under the tiles cause breakage after use.
- Use a rubber hammer during installation.
- Protect the product from anything that may contaminate it during and after laying.
- Extreme heat, extreme cold, wind and rain adversely affect the laying mortar. Pay attention. Take all necessary precautions in these cases. Do not install if you cannot take precautions.
- The thickness of the flooring mortar varies according to the type of flooring.
  - a. If it is to be done by pouring cement grout on the mortar mixture, it should be between 15-30 mm,
  - b. If laying will be done by laying damp leveling mortar on the bottom and wet mortar on the top, the mortar mixture should be between 30-50 mm.
  - c. CAUTION: If the thickness is more than recommended, fractures may occur. If a different laying method is to be used, AS KARO must be consulted.
- Terrazzo Tiles should be laid by leaving joint gaps. These gaps are closed by filling the joint gaps after the installation process. It is important to fill the joint gaps completely, the pste process has 2 tasks. The first is to clamp the tiles together, the second is to fill the gaps under the tiles (especially at 4 corner joints). It should be repeated 2-3 times. The recommended joint gap is 2 mm.
- Wait for 10 days to see the final form of the assembled products. This period is sufficient for the floor mortar and the product to be free from moisture.
- The shipped tiles should be used within 2.5 months at most. Otherwise, the surface polish will interact.
- A space should be left in the middle of the step in the assembly of L step. Otherwise, cracks occur.
- Installation of the product should not be done prematurely, while rough construction is in progress. If the installation is done before the time many problems such as contamination, breakage, leaving the mortar caused by stepping on newly installed places that should not be stepped on, and lack of protection may occur due to the usage errors of the rough construction. Installation of tiles and steps can be done after all work on the ceiling has been completed and before the final coat of paint. In this way, small modifications that may occur during the application are made and the work is completed with the top coat of paint. In outdoor areas, installation should not be done before the time. The installation area should not be exposed to vehicle traffic such as lorry, digger, cylinder. It should be protected from all elements that will scratch, break, wear, damage and pollute the finished product such as construction rubble, sand, cement, iron fertiliser.
- The applied area should not be pressed for 3-7 days depending on weather conditions.
- The products produced by AS KARO are in the fine work group. Products should be treated and protected with this sensitivity.
- It is necessary to pay attention to the following when assembling outdoors in areas exposed to the sun;
  - a. During installation, the floor and the back of the product should be wetted with plenty of water. It should be protected from excessive heat.
  - b. When the assembly is done outdoors, the product heats up with the effect of the sun. This heat causes water loss in the mortar. In order to prevent this, the place of installation and the back of the product should be wetted with plenty of water and saturated with water
  - c. If water loss occurs due to heat, there is a risk of non-adhesion. The product and mortar may leave each other. At the time of installation, the product and the floor should be saturated with plenty of water.

### Joint Filling - Issues to be Considered During Putty

- Joint filling should be done 3-7 days after the installation, depending on weather conditions.
- Construction residues between the joints should be cleaned and humidified before the puttying of the assembled products. Cleaning can be done with a thin-tipped stick.
- For joint filling process, dilute the mixture of white cement and marble powder (colouring pigment if necessary) until it reaches buttermilk consistency. It should be applied at least 2 times vertically and diagonally with a squeegee for full penetration between the joints
- If another application is to be made, written approval must be obtained that the product to be used will not harm the products purchased from AS KARO.
- The top coat should be applied in a more solid consistency (putty). The last coat of putty should be dried slowly, otherwise, gaps in the colour of the putty will occur.
  - If there is a gap or collapse, the process should be repeated. The process should be repeated until there is no collapse.
- In the surface drying process; Cement + marble powder (coloring paint), which is the mixture in the paste-making process leftover from the filling-paste process, should be used in dry form. The surface must be completely dried. Otherwise, the paste residue will adhere to the surface and cause visual and usage pollution.
- At the earliest 12 hours after the completion of the process, the surface should be washed with soapy water and rinsed with plenty of water.
- The putty process has three tasks. The first is to interlock the products, the second is to prevent water and moisture from entering under the products and the third is to fill the gaps under the products caused by the assembly.
- If the joint process is not done correctly indoors and outdoors, it causes efflorescence. As the efflorescence is repeated, it damages the product strength.

## Technical Information

### Impregnation (Water Repellent and Anti-Stain Additive) Application and Properties

**Description:** It is a colorless and waterproof impregnation material for terrazzo tiles and precast products. It is water based and non-flammable.

**Application Areas:** It is used for providing water impermeability and increasing resistance to weather conditions in interior and exterior spaces and facade coatings where terrazzo tiles and precast products are used.

**Method of Use:** Apply on clean and dry surface with a roller brush. In the first application, it should be ensured that the surface absorbs the additive completely. The second coat is applied in the same way before the applied additive is completely dry and allowed to dry.

**Capacity:** It can be applied to 8-14 m<sup>2</sup> area with 1 litre. This rate may vary depending on the product used on the floor.

**Storage:** It can be stored for 1 year at normal room temperature. Since it will be affected by humidity in the air, the packages should be well closed after use.

#### Matters to be Considered:

- The application should not be done under the sun.
- The water impermeability additive should be applied with a roller brush and by being fed.
- Do not approach with fire at the time of application and until it dries..
- Keep away from children.
- It should not be sprayed in the mouth and eyes.
- Keep away from water until it dries.

### As Karo Technical Information in TSE (Turkish Standardization Institute) Standards

	INTERIOR				EXTERIOR			
	TSE		AS KARO		TSE		AS KARO	
BREAKING LOAD	BL I	-	BL I	-	3T	3 kN	5 - 11 - kN	
	BL II	2,5 kN	BL II	2,7-4 kN	4T	4,5 kN		
	BL III	3,0 kN	BL III	3,7-5 kN	7T	7 kN		
BENDING RESISTANCE	5 Mpa		6-10 Mpa		11T	11 kN	4,5-7 Mpa	
					ST	3,5 Mpa		
					TT	4 Mpa		
WATER ABSORPTION BY MASS	<%8		<%2-6		<%6		<%3,5-5,5	
ABRASION	TSE		AS KARO		TSE		AS KARO	
	Capon Test (mm) <25mm	Böhme Test (cm <sup>2</sup> / 50cm <sup>2</sup> ) 30 cm <sup>2</sup> / 50 cm <sup>2</sup>	Capon assay (mm) <14-20 mm	Böhme Test (cm <sup>2</sup> / 50cm <sup>2</sup> ) 12-18 cm <sup>2</sup> / 50 cm <sup>2</sup>	Capon Test (mm) <20-26 mm	Böhme assay (cm <sup>2</sup> / 50cm <sup>2</sup> ) 18-26 cm <sup>2</sup> / 50 cm <sup>2</sup>	Capon Test (mm) <14-20 mm	Capon Test (cm <sup>2</sup> / 50cm <sup>2</sup> ) 12-18 cm <sup>2</sup> / 50 cm <sup>2</sup>
ANTI-SLIP	TSE	AS KARO		TSE	AS KARO			
	NOT REQUIRED		USRV	RAMP	NOT REQUIRED		USRV	RAMP
		POLISHED	40 - 45	R9		SANDBLASTING	55 - 70	R10 - R11
		HONED	45 - 50	R9 - R10		MEDIUM SANDBLASTING	60 - 75	R11 - R12
		BRUSHED	40 - 50	R9		BUSH HAMMER	80 - 90	R12 - R13
				WASH CONCRETE	80 - 90	R12 - R13		

### Product Quality Standards

As Karo manufactures in the following quality standards.

1. **TS 213-1 EN 13748-1** ( For Indoor Use )

2. **TS 213-2 EN 13748-2** ( For Outdoor Use )

3. **TS 13631** ( Flooring and Stair Cladding Plates )

4. **ISO 9001 : 2015**

5. **ISO 14001 : 2015**

6. **ISO 45001 : 2018**

7. **SII** (Standards Institution of Israel )

8. **GOST "GOCT"** ( Russian State Standards )

9. **NF** (Certifie Par Organisme Mandate France )

# Our Quality Certificates





# Farama

TERRAZZO TILES

1974 **Bekir Ovacilli** Foundation





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