SAHARA SERIES
Made With Diligence

Full Body Vitrified Tiles
600x600 mm
The full body Sahara Series is a work of diligence, providing homogeneous body tiles. The aesthetic appeal of the tile remains intact even after prolonged exposure to wear and tear, making it the most preferred durable tile.

All the five designs – Sahara Nero, Sahara Creama, Sahara Beige, Sahara Gris and Sahara P Kota Green are made by a mixing natural clay, feldspar, quartz and natural pigments. Our manufacturing experts use special pigment grains for even dispersion, ensuring minimal color variation across batches.

All the touch points like silos, lifting machines, conveyor belts where the mixture passes through are treated with utmost care to nullify impurities. As a precautionary measure, even the conveyor belts are covered to prevent impure dust.

And while all this is done to ensure similarity between batches, quality team works to guarantee that every batch meets the high MOR standard.

The process Diligence thus makes our full body tiles replete with functional USP’s of higher durability and higher breaking strength.

Product Features:

- HIGH MOR
- ECO FRIENDLY
- ANTI-SKID
- SCRATCH RESISTANT
- CHEMICAL RESISTANT
- LOW MAINTENANCE
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---

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*Made With Diligence*

---

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---

**SAHARA SERIES**

*Made With Diligence*
SAHARA SERIES
Made With Diligence

SAHARA GRIS
SAHARA ROCK BEIGE
SAHARA ROCK CREAMA
SAHARA ROCK GRIS
SAHARA ROCK NERO
SAHARA ROCK P KOTA GREEN
SAHARA SLATE P KOTA GREEN
SAHARA P KOTA GREEN AVAILABLE IN ROCK & SLATE FINISH

MOQ : 3000 Sq. Meter
Make to Order : 45 Days
SAHARA SERIES
Made With Diligence

ALSO AVAILABLE IN ROCK FINISH

SAHARA ROCK NERO
SAHARA ROCK CREAMA
SAHARA ROCK BEIGE
SAHARA ROCK GRIS

SAHARA P KOTA GREEN AVAILABLE IN ROCK & SLATE FINISH

SAHARA ROCK P KOTA GREEN
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MOQ: 3000 Sq. Meter
Make to Order: 45 Days
**FULL BODY TILES ADVANTAGES OVER KOTA STONE**

| **Wear and Tear** | Full body tiles are made by vitrified process and have homogeneous body, they have better scratch hardness (6 on Mohs’ scale) than 3-4 for Kota Stone hence once installed they are ready to take heavy footfall and hence don’t allow wear and tear keeping the aesthetic appeal of the surface remain intact, where as in stones slight chipping of the top layer happens. |
| **Color Variation** | Full body tile shade has very little variation (5-10%), whereas stone being natural product, both quality and shade of the stone is unpredictable. |
| **Stain Resistance** | Full body tiles don’t allow any kind of stains to remain on the surface due to invisible glaze layer on them, where as stone being a natural substance allows stains, household items like ketchup, jam, polish and tend to make surface sticky and ugly. |
| **Chemical Resistance** | Natural kota stone tends to react with acids & starts losing its sheen and aesthetics, where full body tiles don’t react (except hydroloric acid and its deratives), infact our R&D team also certifies it with a test done in laboratory. |
| **Water Absorbtion** | Tile has almost negligible water absorption (less than 0.08%), where as stone has slightly higher approx. 0.31%, therefore making it suitable product for laying it where there is exposure to water and moisture, also provides better grip and breakage free |
| **Slip Resistance** | Full body tiles are matt finish & slip resistant flooring, unlike Kota stone, where sometimes highly polished stone tends to become slippery and become risky. Hence, many educational institutes like school and colleges are replacing their kota stone flooring with our full body tiles to keep the floor safer for the children |
| **Installation Process** | Tiles are readymade material, can be installed once after the surface is prepared, while for Kota stone you need to polish it for several times after installation hence leading to noisy and cumbersome process. Infact, you may need to do polish it after every 3-4 years to maintain its sheen. |
| **Building Weight** | For 600x600mm size, 9.5mm full body tiles weight approx 8kg where as kota stone of similar size and thickness 15mm weighs around 20kg thus making the surface weight higher, hence making the overall weight of the structure (building) more. |
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For 600x600mm size, 9.5mm full body tiles weight approx 8kg whereas kota stone of similar size and thickness 15mm weighs around 20kg thus making the surface weight higher, hence making the overall weight of the structure (building) more.
Introducing 15.5MM thick full body vitrified tiles catering to all your needs of heavy duty industry tiling.

Strong and Durable range with extra thickness having high MOR value and breaking strength, it can be applied on high traffic areas with vehicle movement.

High MOR value make it endure more stress whereas extra thickness prevents it from breaking.

With almost negligible water absorption, this range is available in five colors.

SAHARA HEAVY CREMA  SAHARA HEAVY BEIGE  SAHARA HEAVY GRIS  SAHARA HEAVY NERO  SAHARA HEAVY P KOTA GREEN

MOQ : 2000 Sq. Meter Make to Order : 45 Days
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SAHARA HEAVY CREAM
SAHARA HEAVY NERO
SAHARA HEAVY P KOTA GREEN
SAHARA HEAVY BEIGE

MOQ: 2000 Sq. Meter
Make to Order: 45 Days
SAHARA HEAVY ROCK BEIGE
SAHARA HEAVY CREAMA
SAHARA HEAVY NERO
SAHARA HEAVY ROCK CREAMA
SAHARA HEAVY ROCK GRIS
SAHARA P KOTA GREEN AVAILABLE IN ROCK & SLATE FINISH
SAHARA HEAVY ROCK NERO
SAHARA HEAVY ROCK P KOTA GREEN
SAHARA HEAVY SLATE P KOTA GREEN

MOQ: 2000 Sq. Meter
Make to Order: 45 Days
SAHARA HEAVY ROCK BEIGE

SAHARA HEAVY CREAM

SAHARA HEAVY NERO

SAHARA HEAVY ROCK BEIGE

SAHARA HEAVY ROCK GRIS

SAHARA P KOTA GREEN AVAILABLE IN ROCK & SLATE FINISH

MOQ : 2000 Sq. Meter
Make to Order : 45 Days

SAHARA HEAVY ROCK P KOTA GREEN

SAHARA HEAVY SLATE P KOTA GREEN
METHODS OF INSTALLATION

**DRY INSTALLATION LEVEL ON GRAVEL/SAND**
The dry installation method positions the tiles directly onto the substrates in gravel or sand to create pedestrian pathways that can be walked upon immediately. It is an easy & quick application method and does not require adhesive for installation.

**USING TRADITIONAL ADHESIVES**
The traditional adhesive installation provides an excellent bonding between the substrate and the tiles. This installation method represents the perfect solution for pedestrian lanes as well as lanes with vehicular movement.

*Please note spacer is mandatory when tiles are used for parking (both 9.5mm & 15.5mm).*

**METHODS OF INSTALLATION**

**RAISING FLOORING INSTALLATION WITH SUPPORT**
By raising the installation a technical gap of variable height is created between the tile and the flooring. This gap can be replaced and inspected any time without extirpating the surface that allows pipe ducts, wires, and lighting systems to hide.

**DRY INSTALLATION GRASS**
In this method the slabs are directly installed onto the grass to pedestrian pathways that can be walked upon immediately post-installation but are not suitable for movement of vehicles. It is easy & quick to install and does not require use of adhesives for installation.

*Dry installation can be done for pedestrian pathways only.*
DRY INSTALLATION LEVEL ON GRAVEL/SAND*

The dry installation method positions the tiles directly onto the substrates in gravel or sand to create pedestrian pathways that can be walked upon immediately. It is an easy & quick application method and does not require adhesive for installation purpose.

*Please note spacer is mandatory when tiles are used for parking (both 9.5mm & 15.5mm)

USING TRADITIONAL ADHESIVES

The traditional adhesive installation provides an excellent bonding between the substrate and the tiles. This installation method represents the perfect solution for pedestrian lanes as well as lanes with vehicular movement.
### Full Body Vitrified Tiles 9.5 mm

#### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Standard Test Method</th>
<th>IS 15622 Requirements</th>
<th>OBL Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimension &amp; Surface Quality</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deviation in Size (Length &amp; Width)</td>
<td>IS 13630 (Part 1):2006</td>
<td>± 0.1 %</td>
<td>± 0.1 % (Max)</td>
</tr>
<tr>
<td>Deviation in thickness</td>
<td></td>
<td>± 0.1 %</td>
<td>± 0.1 % (Max)</td>
</tr>
<tr>
<td>Straightness of sides</td>
<td></td>
<td>± 0.1 %</td>
<td>± 0.1 % (Max)</td>
</tr>
<tr>
<td>Rectangularity</td>
<td></td>
<td>± 0.1 %</td>
<td>± 0.1 % (Max)</td>
</tr>
<tr>
<td>Surface Finish</td>
<td></td>
<td>± 0.3 %</td>
<td>± 0.2 % (Max)</td>
</tr>
<tr>
<td>Surface Quality</td>
<td></td>
<td></td>
<td>✓ ✓</td>
</tr>
</tbody>
</table>

- Mix 95% of the tiles shall be free from visible defects that would impair the appearance of a major area of the tile
- Conform

### Physical Properties

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>IS 13630 Part 2</th>
<th>IS 13630 Part 6</th>
<th>IS 13630 Part 3</th>
<th>IS 13630 Part 13</th>
<th>IS 13630 Part 11</th>
<th>IS 13630 Part 10</th>
<th>IS 13630 Part 12</th>
<th>IS 13630 Part 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water absorption %</td>
<td>IS 13630 Part 2</td>
<td>Average ≤0.08%</td>
<td>Individual 0.10% Max.</td>
<td>Average ≤0.08%</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modulus of rupture N/mm²</td>
<td>IS 13630 Part 6</td>
<td>Average 35, Individual 32 Mpa</td>
<td>Min 45 N/mm²</td>
<td>✓ µ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breaking Strength N</td>
<td>IS 13630 Part 6</td>
<td>Min 700 Mpa for thickness &lt;7.0mm, 1200 Mpa for Thickness ≥7.5 mm</td>
<td>Min 2000 N</td>
<td>✓ µ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moisture Expansion</td>
<td>IS 13630 Part 3</td>
<td>0.02% Max</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scratch hardness (Moh’s Scale)</td>
<td>IS 13630 Part 13</td>
<td>5 Min</td>
<td>7 Min</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistance to surface abrasion of glass (Class I to V) (Applicable for floor applications only):</td>
<td>IS 13630 Part 11</td>
<td>Min 8</td>
<td></td>
<td>Class V</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear thermal expansion Co-efficient</td>
<td>IS 13630 Part 4</td>
<td>6 x 10⁻⁶ max</td>
<td>6 x 10⁻⁶ max</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal Shock Resistance</td>
<td>IS 13630 Part 5</td>
<td>10 Cycle Min</td>
<td></td>
<td>Pased</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact Resistance</td>
<td>IS 13630 Part 14</td>
<td>0.55, Min</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient of Fritness</td>
<td>ISO 10545 Part 17</td>
<td>Manufacturer to declare value where required</td>
<td>K-11 in pendulum test method</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frost Resistance</td>
<td>IS 13630 Part 10</td>
<td>Required if agreed between manufacturer and purchaser</td>
<td>50 cycle passed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistance to deep abrasion of exposed tiles</td>
<td>IS 13630 Part 12</td>
<td>140, Max</td>
<td></td>
<td>Class AA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulk density g/cc</td>
<td>IS 13630 Part 2</td>
<td>2.2, Min</td>
<td>2.2, Min</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Chemical Properties

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>IS 13630 Part 8</th>
<th>IS 13630 Part 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance to Staining of Glazed Tiles</td>
<td>Class 1 Min</td>
<td>Class 1</td>
</tr>
<tr>
<td>Resistance to Household Chemicals</td>
<td>Class AA</td>
<td>Class AA</td>
</tr>
<tr>
<td>Resistance to Acids and Alkalies (+ exception of hydrofluoric acid and its compound)</td>
<td>Class AA</td>
<td>Class AA</td>
</tr>
</tbody>
</table>
# TECHNICAL SPECIFICATIONS

## Full Body Vitrified Tiles 15.5 mm

<table>
<thead>
<tr>
<th>Size</th>
<th>No. of Tiles Per Carton</th>
<th>Covered Area Per Carton</th>
<th>[In Sq. Mtr.]</th>
<th>[In Sq. Ft.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>600x600 mm (SKD)</td>
<td>4</td>
<td>1.44</td>
<td></td>
<td>15.50</td>
</tr>
</tbody>
</table>

### Packing Details

#### As per Indian Standard (IS 15622:2017) Group 8 a

<table>
<thead>
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<tr>
<td>Dimension &amp; Surface Quality</td>
<td>IS 13630 (Part 1):2006</td>
<td>±0.1 %</td>
<td>±0.1 % (Max)</td>
</tr>
<tr>
<td>Deviation in Size (Length &amp; Width)</td>
<td>IS 13630 Part 2</td>
<td>Average ≤0.08%, individual 0.10% Max.</td>
<td>Average ≤0.08%</td>
</tr>
<tr>
<td>Deviation in Thickness</td>
<td>IS 13630 Part 6</td>
<td>±0.0 %</td>
<td>±3.0 % (Max)</td>
</tr>
<tr>
<td>Straightness of sides</td>
<td>IS 13630 Part 6</td>
<td>±0.1 %</td>
<td>±0.1 % (Max)</td>
</tr>
<tr>
<td>Rectangularity</td>
<td>IS 13630 Part 6</td>
<td>±0.1 %</td>
<td>±0.1 % (Max)</td>
</tr>
<tr>
<td>Surface Flatness</td>
<td>IS 13630 Part 6</td>
<td>±0.5 %</td>
<td>±0.2 % (Max)</td>
</tr>
<tr>
<td>Surface Quality</td>
<td>IS 13630 Part 6</td>
<td>Free of visible defects that would impair the appearance of a major area of the tile</td>
<td>Conform</td>
</tr>
<tr>
<td>Physical Properties</td>
<td>IS 13630 Part 3</td>
<td>0.02 Max</td>
<td>Conform</td>
</tr>
<tr>
<td>Water absorption %</td>
<td>IS 13630 Part 13</td>
<td>3 Min</td>
<td>7 min</td>
</tr>
<tr>
<td>Resistance to surface abrasion of glazed tiles Class I to V (Applicable for floor applications only)</td>
<td>IS 13630 Part 4</td>
<td>Min 8</td>
<td>Class V</td>
</tr>
<tr>
<td>Linear thermal expansion Coefficient</td>
<td>IS 13630 Part 3</td>
<td>6x10^-8 max</td>
<td>6x10^-8 max</td>
</tr>
<tr>
<td>Thermal Shock Resistance</td>
<td>IS 13630 Part 4</td>
<td>10 Cycle Min</td>
<td>Passed</td>
</tr>
<tr>
<td>Impact Resistance</td>
<td>IS 13630 Part 4</td>
<td>0.55, Min</td>
<td>0.75</td>
</tr>
<tr>
<td>Coefficient of Fritation</td>
<td>ISO 10545 Part 15</td>
<td>Manufacturer to declare value where required</td>
<td>K:11 in pendulum test method.</td>
</tr>
<tr>
<td>Frost Resistance</td>
<td>IS 13630 Part 10</td>
<td>Required if agreed to between manufacturer and purchaser</td>
<td>50 cycle passed</td>
</tr>
<tr>
<td>Resistance to deep abrasion of unglazed tiles</td>
<td>IS 13630 Part 12</td>
<td>1.40, Min</td>
<td>Class AA</td>
</tr>
<tr>
<td>Bulk density g/cc</td>
<td>IS 13630 Part 2</td>
<td>2.2, Min</td>
<td>2.2, Min</td>
</tr>
<tr>
<td>Chemical Properties</td>
<td>IS 13620 Part 8</td>
<td>Class I Min</td>
<td>Class I</td>
</tr>
<tr>
<td>Resistance to Staining of Glazed Tiles</td>
<td>IS 13620 Part 8</td>
<td>Class AA</td>
<td>Class AA</td>
</tr>
<tr>
<td>Resistance to Acids and Alkalis (with exception of hydrochloric acid and its compound)</td>
<td>IS 13620 Part 8</td>
<td>Class AA</td>
<td>Class AA</td>
</tr>
</tbody>
</table>

**NOTE:** Certain amount of Size and Shade variation is inherent in all ceramic products. Within the limits of printed material, the colors and aesthetics of the products correspond closely to those of illustrated products. Prospective customers are advised to inspect a sample of the tile before ordering and laying. At all points of time, the company liability is restricted to the purchase value of tiles.

Every effort has been made to ensure the accuracy of the information given. However, the company reserves the right to delete & change, any of the items, colors, sizes & technical specifications without any prior notice.
Making Tile Selection Easier

- SameLook: Find tiles similar to a reference image
- TriALook: Tiles selected by you in your room
- QuickLook: Visualise selected tiles & get a quote
- TruLook: Share layout for a personalised render*

www.orientbell.com

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