

KEEP YOUR  
ROOMS  
**COOL**  
THIS SUMMER



COOL®  
TILES

With SRI Value - upto 98\*

**APPLICATION AREAS:**

Building Terraces | Exterior Walls | Pavements | Balconies

Size: 300x300 mm



**Cool<sup>®</sup>**  
TILES

**With SRI Value - upto 98\***

# 5 Coolest Benefits with OBL Cool Tiles



## Comfortable Interiors

Summer responsive roof and wall reduce the room temperature



## Innovative Use

Security Guard Cabin,  
Roof Top water Tanks (outer wall)



## Energy Saving

Cooler interiors lead to lesser requirement of energy



## Additional Advantage

Slip Resistant  
Cooler surface to walk on



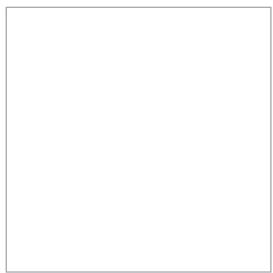
## Helps Environment



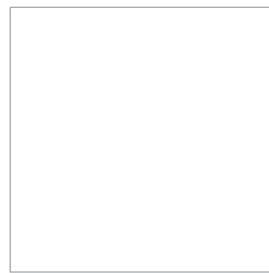
**IGBC & GRIHA certified**

*\*SRI Value tested by Verified laboratories for both the manufacturing plants.*

From Sikandarabad

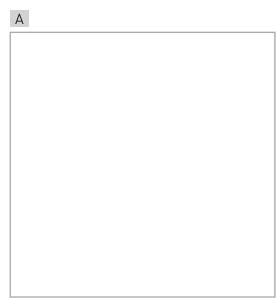
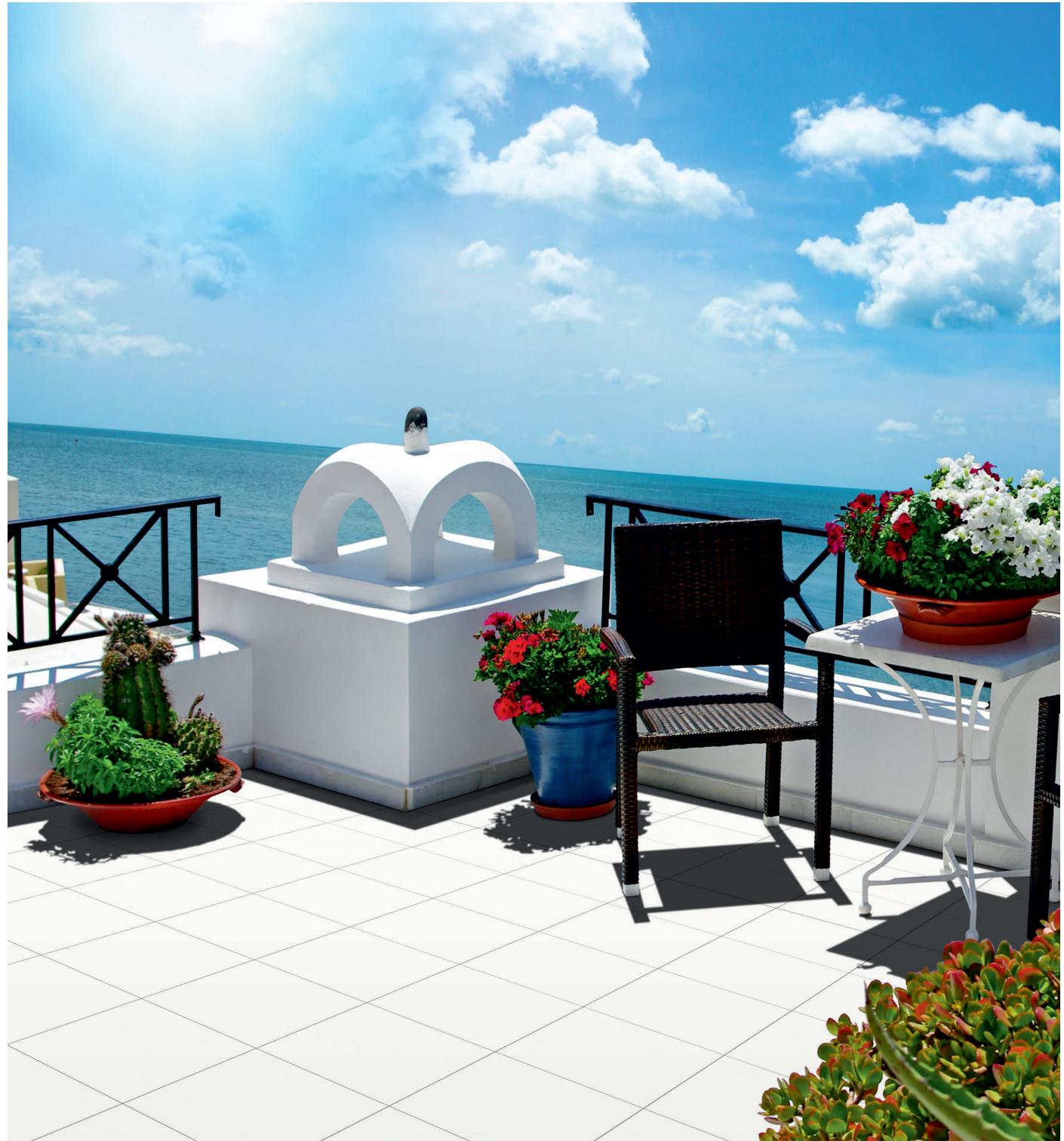


300x300mm |  
ORIENT COOL TILES (EC) BIANCO  
Floor Tile



300x300mm |  
OPV ORIENT EC COOL TILES  
Paver Tile

From Hoskote



300x300mm |  
PAV COOL TILE WHITE  
Paver Tile



300x300mm |  
HULK COOL WHITE  
Paver Tile

# Test Report

Cool Tiles - Sikandarbad Plant



Report No: CRDF/RPT/SRI/493

## 2.1.2 Results of the measurement:

### Solar Direct Reflectance

Sample name	Sample ID	Measurement 1	Measurement 2	Measurement 3	Average
300 x 300 Ceramic Tile	SRI/02/20/1494	0.7825	0.7825	0.7831	0.7827

### Emissivity

Sample name	Sample ID	Measurement 1	Measurement 2	Measurement 3	Average
300 x 300 Ceramic Tile	SRI/02/20/1494	0.890	0.889	0.887	0.889

### Solar Reflectance Index (SRI) under different wind conditions

Sample name	Sample ID	Low Wind( $h=5 \text{ W m}^{-2} \text{ K}^{-1}$ )	Medium Wind( $h=12 \text{ W m}^{-2} \text{ K}^{-1}$ )	High Wind( $h=30 \text{ W m}^{-2} \text{ K}^{-1}$ )
300 x 300 Ceramic Tile	SRI/02/20/1494	97	97	98

### Surface Temperature ( $T_s$ ) under different wind conditions

Sample name	Sample ID	Low Wind( $h=5 \text{ W m}^{-2} \text{ K}^{-1}$ )	Medium Wind( $h=12 \text{ W m}^{-2} \text{ K}^{-1}$ )	High Wind( $h=30 \text{ W m}^{-2} \text{ K}^{-1}$ )
300 x 300 Ceramic Tile	SRI/02/20/1494	50.9	45.6	41.3

Remark, if Any:

### 3 Certificate of Accuracy:

This is to certify that the test results herein presented are, to the best of my knowledge, true and accurate representations of the samples submitted.



*Yashkumar Shukla*  
Yashkumar Shukla  
Technical Director

## Cool Tiles - Hoskote Plant



No: OBL/108/1

NTPL/2022-23

## TEST REPORT

Ref.No: NTPL/108/1/2022-23	Date of Receipt: 29.08.2022	No. of Pages: 1/1	
Sample Description	Date of Issue : 10.09.2022		
Sample submitted by	Ceramic Roof Tile - Cool White / Colour : White		
Issued in favour of	Orient Bell Limited Village-Chokkahalli, Taluka-Hoskote,,Bengaluru, Bengaluru (Rural), Pin-562114, Karnataka.		
Reference	Orient Bell Limited Village-Chokkahalli, Taluka-Hoskote,,Bengaluru, Bengaluru (Rural), Pin-562114, Karnataka P.O. No: JPOHSK/2223/00186 Dated 23.08.2022		
Test Method	ASTM: C-1549; ASTM: C-1371 and ASTM: E-1980		
TEST PARAMETER	TEST METHOD	OBTAINED VALUES (Average)	
Solar Absorptance ( $\alpha$ )	ASTM:C-1549	0.215	
Solar Reflectance (R)	ASTM:C-1549	0.784	
Thermal Emissivity (e)	ASTM:C-1371	0.84	
Solar Reflectance Index Value ("SRI Value")	ASTM:E-1980	97	
Surface Temperature with Solar Reflectance Index (SRI Value) under different wind conditions			
Wind Condition	Low Wind (0-2 m/s)	Medium Wind (2-6 m/s)	High Wind (6-10 m/s)
Surface Temperature	51.5 °C	45.9 °C	41.4 °C
Solar Reflectance Index (SRI Value)	96.0	96.6	97.1

Instruments Used: 1. Solar Spectrum Reflectometer (wavelength range: 0.3 - 2.5μm) for Solar Absorptance & Solar Reflectance  
2. Emissiometer(wave length range: 3-30 μm) for Thermal Emissivity  
(\* SRI Value - By calculation from Solar Reflectance and Thermal Emissivity)

The results relate only to the sample tested. The test report should not be utilized for any legal purposes  
and will not be produced in the court of law and no responsibility will be attached to this laboratory

This test report is issued under the conditions mentioned overleaf

*Aneesh*  
AUTHORIZED SIGNATORY



CHENNAI-78  
NEWTECH TILES AND PAVERS TESTING LABORATORY

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CEPT Research & Development Foundation, CEPT University, K. L. Campus, Navrangpura, Ahmedabad - 380 009  
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# Certificate

Cool Tiles - IGBC & GRIHA



## GRIHA Council

This is to certify that the product of  
**Orient Bell Limited**

### "Orient Bell Cool Tiles"

have been included in the GRIHA Product Catalogue  
under the following categories:

**GRIHA V.3 criterion: 5 & 14**

**GRIHA V.2015 criterion: 3 & 8**

&

**SVAGRIHA criterion: 2 & 5**

These products can be used in GRIHA & SVAGRIHA registered projects to meet the GRIHA & SVAGRIHA norms, respectively. This is valid only for the products which have been mentioned above.

The certificate for the above mentioned products is valid from  
**6<sup>th</sup> September 2021 – 5<sup>th</sup> September 2023**

Sanjay Seth

Chief Executive Officer

*Note: This evaluation has been done based on the documentation - in the form of 3rd party test results and/or declarations - submitted by the manufacturer to GRIHA Council.*

GRIHA Council is a joint initiative of Ministry of New and Renewable Energy, Government of India and The Energy and Resources Institute (TERI) to implement GRIHA (Green Rating for Integrated Habitat Assessment), India's National Rating System for Sustainable Habitats.  
[www.grihaindia.org](http://www.grihaindia.org)



# TECHNICAL SPECIFICATIONS | Cool Tile (Floor & Pavers) From Sikandarabad

Packing Details					
Size ( In mm.)	No. of Tiles Per Carton	Covered Area Per Carton		No. of Box Per Layer	No. of Layer Per Pallet
		( In Sq. Mtr. )	( In Sq. ft. )		
300X300 (Cool Tile)	10	0.9	9.69	32	3

		Requirement as per IS 15622:2017 $3 < E \leq 6$ (Group B IIa)		Requirement as per IS 15622:2017 $0.08 < E \leq 3$ (Group B Ib)	
Characteristics	Test Method	Cool Tile Floor Body Value		Cool Tile Paver Body Value	
<b>Dimension &amp; Surface Quality</b>					
Deviation in Length & Width	IS 13630 Part1	$\pm 0.1\%$		$\pm 0.1\%$	
Deviation in Thickness		$\pm 4.0\%$		$\pm 4.0\%$	
Straightness of Sides		$\pm 0.1\%$		$\pm 0.1\%$	
Rectangularity		$\pm 0.1\%$		$\pm 0.1\%$	
Surface Flatness		$\pm 0.2\%$	😊😊	$\pm 0.2\%$	😊😊
Surface Quality		Conforms		Conforms	
<b>Physical Properties</b>					
Water Absorption %	IS 13630 Part 2	3-6%	😊😊	Max 2%	😊
Modulus of Rupture in [N/mm <sup>2</sup> ]	IS 13630 Part 6	Min 30 N/mm <sup>2</sup>	😊😊	Min 36 N/mm <sup>2</sup>	😊😊
Breaking Strength in N	IS 13630 Part 6	Min 700 N	😊😊	Min 1600 N	😊😊
Moisture Expansion	IS 13630 Part 3	Conforms		Conforms	
Scratch Hardness (Moh's Scale)	IS 13630 Part 13	4 Min	😊	Min 6	😊
Resistance to Surface abrasion of glaze tiles Class I to V (Applicable for floor applications only)	IS 13630 Part 11	Class II to IV (Depending on surface)		Class III to V (Depending on surface)	
Linear thermal expansion Co-efficient	IS 13630 Part 4	Conforms		Conforms	
Thermal Shock Resistance	IS 13630 Part 5	Passed		Conforms	
Crazing Resistance	IS 13630 Part 9	Passed		Conforms	
Impact Resistance	IS 13630 Part 14	Min 0.60		Min 0.60	
Bulk Density, in g/cc	IS 13630 Part 2	Min 2.18 g/cc		Min 2.24 g/cc	
Frost Resistance	IS 13630 Part 10	Passed		Passed	
<b>Chemical Properties</b>					
Resistance to staining of Glazed Tiles	IS 13630 Part 8	Min. Class-1		Min. Class-1	
Resistance to Household Chemicals		Min. Class-AA		Min. Class-AA	
Resistance to acids and alkalis (Except HF)		Min. Class-AA		Min. Class-AA	

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.

# TECHNICAL SPECIFICATIONS | Cool Tile (Pavers) from Hoskote

## Packing Details

Size (In mm.)	No. of Tiles Per Carton	Covered Area Per Carton		No. of Box Per Layer	No. of Layer Per Pallet
		(In Sq. Mtr.)	(In Sq. ft.)		
300X300 (Cool Tile)	10	0.9	9.69	30	2

As per ISO 13006:2012 (Group B Ia) and as IS 15627:2017 (Group B Ib)

Characteristics	Test Method	Required as per IS 15622:2017 $0.08 < E \leq 3\% \text{ ( Group B b )}$	OBL Value
Dimension & Surface Quality		Unrectified      Rectified	
Deviation in Length & Width		$\pm 0.4\%$	$\pm 0.1\%$
Deviation in Thickness		$\pm 5.0\%$	$\pm 4.0\%$
Straightness of Sides		$\pm 0.3\%$	$\pm 0.1\%$
Rectangularity		$\pm 0.3\%$	$\pm 0.1\%$
Surface Flatness		$\pm 0.5\%$	$\pm 0.2\%$ 😊😊
Surface Quality		Min. 95 % tiles should be free from visible defects	Conform
Physical Properties			
Water Absorption %	IS 13630 (Part 2):2006	Avg $0.08 < E \leq 3\%$ , Individual $3.3\% \text{ Max}$	Av $< 3\%$ 😊😊
Modulus of Rupture in [N/mm <sup>2</sup> ]	IS 13630 (Part 6):2006	Avg 30, Individual 27 Min	$> 35$ 😊😊
Breaking Strength in N	IS 13630 (Part 6):2006	700 Min for thickness $< 7.5 \text{ MM}$ , 1100 Min for thickness $\geq 7.5 \text{ MM}$	1500 Min 😊😊
Moisture Expansion	IS 13630 (Part 3):2006	0.02 Max	Conforms
Scratch Hardness (Moh's Scale)	IS 13630 (Part 13):2006	5 Min	5-8 depends on surface 😊
Resistance to Surface abrasion of glaze tiles Class I to V (Applicable for floor applications only)	IS 13630 (Part 11):2006	Class II Min	3-5 as per design/surface
Linear thermal expansion Co-efficient	IS 13630 (Part 4):2006	$7 \times 10^{-6}$ , Max	Conforms
Thermal Shock Resistance	IS 13630 (Part 5):2006	10 Cycles, Min	Passed
Crazing Resistance	IS 13630 (Part 9):2006	4 Cycles at 7.5 Bar, Min	Passed
Impact Resistance	IS 13630 (Part 14):2006	0.55, Min	Conforms
Frost Resistance	IS 13630 (Part 10):2006	Required	Resistance
Chemical Properties			
Resistance to staining of Glazed Tiles	IS 13630 (Part 8):2006	Class I Min	Min. Class-1
Resistance to Household Chemicals		Class AA, Min	Min. Class-AA
Resistance to acids and alkalis (Except HF)		Require If Agreed	Required, if agreed

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.

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Listed on BSE (530365) for 20+ years. And also on NSE (ORIENTBELL).