

**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[®]
T I L E S

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

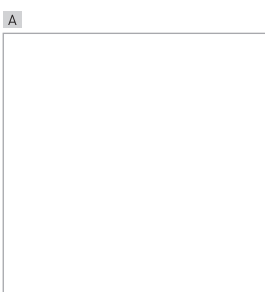
**SRI Value tested by Verified laboratories for both the manufacturing plants.*



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



300x300mm |
OPV ORIENT EC COOL TILES
Paver Tile



G5
F1
R1

300x300mm |
PAV COOL TILE WHITE
Paver Tile



G5
F1
R1

300x300mm |
HULK COOL WHITE
Paver Tile

Test Report

Cool Tiles - Sikandarbad Plant



CRDF
CEPT RESEARCH AND DEVELOPMENT FOUNDATION

CEPT Research & Development Foundation
Test Report for Solar Reflectance Index (SRI)




ULR-TC70202000000187F Report Date: 20th February 2020

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

Surface Temperature (T_s) under different wind conditions

Sample name	Sample ID	Surface Temperature (°C)		
		Low Wind($h_w=5 \text{ W m}^{-2} \text{ K}^{-1}$)	Medium Wind($h_w=12 \text{ W m}^{-2} \text{ K}^{-1}$)	High Wind($h_w=30 \text{ W m}^{-2} \text{ K}^{-1}$)
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.

Cool Tiles - Hoskote Plant



NEWTECH TILES AND PAVERS TESTING LABORATORY
AP-21(Old), 1st Floor, 1st Street, 1st Sector, K.K. Nagar, Chennai - 600 078.
(Regd. Ministry of Micro, Small, Medium Enterprises- Govt. of India)



N.D. Ghossein
ikhil Bhesaniya
ab. Technician



Yashkumar Shukla
Technical Director

Disclaimer:

- The CEPT Research & Development Foundation is not responsible for any kind of alterations in the physical property of the sample and the customer is solely responsible for it and its consequences.
- The test results and the statement of compliance with specification in this report relate only to the test sample as tested and not to the sample/item from which the test sample was drawn. Sample will be destroyed after 7 days of issue of the report unless specified by the customer.
- Any complains about this report should be communicated in writing within 7 days of issue of the report.
- The test report shall not be reproduced fully or partially or in parts and cannot be used as an evidence in a court of law and shall be used in advertising media without written approval of Director, CEPT Research & Development Foundation.

NTPTL/2022-23

TEST REPORT

No. of Pages: 1/1

Ref.No: NTPTL/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	
Test Method	P.O. No: JPOHSK/2223/00186 Dated 23.08.2022 ASTM: C-1549; ASTM: C-1371 and ASTM: E-1980	

TEST PARAMETER	TEST METHOD	OBTAINED VALUES (Average)	
Solar Absorptance (α)	ASTM:C-1549	0.215	
Solar Reflectance (R)	ASTM:C-1549	0.784	
Thermal Emissivity (ε)	ASTM:C-1371	0.84	
Solar Reflectance Index Value (*SRI Value)	ASTM:E-1980	97	
Solar Reflectance Index (SRI Value) under different wind conditions			
Surface Temperature with Solar Reflectance Index			
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. Emissometer (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



Ashish Kumar
AUTHORIZED SIGNATORY

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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
6th September 2021 – 5th 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



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

Characteristics	Test Method	Requirement as per IS 15622:2017 3<E≤6 (Group B IIa)	Requirement as per IS 15622:2017 0.08<E≤3 (Group B Ib)
		Cool Tile Floor Body Value	Cool Tile Paver Body Value
Dimension & Surface Quality			
Deviation in Length & Width	IS 13630 Part1	± 0.1 %	± 0.1 %
Deviation in Thickness		± 4.0 %	± 4.0 %
Straightness of Sides		± 0.1 %	± 0.1 %
Rectangularity		± 0.1 %	± 0.1 %
Surface Flatness		± 0.2 %	± 0.2 %
Surface Quality		Conforms	Conforms
Physical Properties			
Water Absorption %	IS 13630 Part 2	3-6%	Max 2%
Modulus of Rupture in [N/mm ²]	IS 13630 Part 6	Min 30 N/mm ²	Min 36 N/mm ²
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
Chemical Properties			
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 ≤ 3 % (Group B b		OBL Value
		Unrectified	Rectified	
Dimension & Surface Quality				
Deviation in Length & Width	IS 13630 (Part 1):2006	± 0.4 %	± 0.1 %	± 0.10 %
Deviation in Thickness		± 5.0 %		± 4.0 %
Straightness of Sides		± 0.3 %	± 0.1 %	± 0.10 %
Rectangularity		± 0.3 %	± 0.1 %	± 0.10 %
Surface Flatness		±0.5%		± 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≤3%, Individual 3.3 % Max		Av < 3% 😊😊
Modulus of Rupture in [N/mm ²]	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 MM, 1100 Min for thickness ≥ 7.5 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	7x10 ⁻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

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