



Certificate No. : TC-6265

# NATIONAL CERA LAB

## CERAMIC LABORATORY

Shop No. 16, 17, Ground Floor, Dariyalal Plaza,  
Nr. Argil Ceramic, 8-A, N/H, Morbi - 363 642 (Guj.) INDIA.

Ph. : 02822 244049, Mo. : 98252 62649, 96622 97005, 98257 99418  
E-mail : nationalceralab@rediffmail.com

### As per all Countries Export report of Wall, Floor, Vitrified Tiles & Sanitary Wares

## Ref. No.

Date :

Report no NCL/Glazed Porcelain Tile /ISO/12/333/2022-23  
URL NO. URL - TC626522000000258F

Issue date of report Dec. 26. 2022

## TEST REPORT

Page 1 of 2

Name of Company  
Company Address

Tile Merchant,  
Dockrells Complex, Ballymount Rd Upper, Ballymount, Dublin 24, Rep. of Ireland

Lab Identity of test sample

Job Card No:-NCL/2022/D and P/252

Receive Date

15th Dec 2022

Date of Test

15/12/2022 to 26/12/2022 (dd/mm/yy)

Type

Dry Press Ceramic Tiles with low water absorption  $E_v \leq 0.5\%$  Group BI a

Nominal size ( N )

1200X600 mm ( Rectified )

Work Size ( Sw )

1200x600x8.75 mm ( Rectified )

Nature of surface

Glazed ( GL. )

Party Given description

Glazed Vitrified Tiles(PGVT) Polish

Received Box

ICON

Quantity of sample

06 Pieces.

Reference Test standard

ISO 13006:2018 - Annex G , Dry Press Ceramic Tiles with low water absorption ( $E_v \leq 0.5\%$ )

Group BI a

No of pages of the report

2 page

Test Standard

ISO 13006:2018 Ceramic tiles - Definitions , classification , characteristic and marking  
Annex G Dry pressed ceramic tiles  $E_v \leq 0.5\%$  Group BI a

	Test Name	Standard No. for test method
1	Determination of Dimensions & Surface Quality	ISO 10545 - 2 : 2018
2	Width	ISO 10545 - 2 : 2018
3	Thickness	ISO 10545 - 2 : 2018
4	Determination Water Absorption in %	ISO 10545 - 3 : 2018
5	Determination of Breaking Strength in N, & Modulus of Rupture N/mm <sup>2</sup>	ISO 10545 - 4 : 2019

Tested by

Nimesh Kavar ( Testing Eng. )

Checked &amp; Verified By

Aritra Bera ( Testing Eng. )

Reviewed &amp; Approved By

Jerambhai Kavar( QM/TM )



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Kind Of Test	Test Method	Requirements as per	Result
<b>Dimensions and Surface Quality</b>		ISO 13006:2018 Annex G N ≥ 15 cm Whichever is less is applicable	
1 <b>Width</b> The deviation in mm of the average size of each tile ( 2 sides ) from the work size	ISO 10545-2:2018	±0.3%	Aveg. 0.02%
		±1 mm	Aveg. - 0.00%
			Avg. 0.09mm
			Avg.- 0.00mm
2 <b>Thickness</b> Party declare 8.75mm The deviation in mm of the average thickness of 10 tile from the work size thickness	ISO 10545-2:2018	±5%	Aveg. 0.21%
			Aveg. -0.00%
		±0.5 mm	Avg. 0.02mm
			Avg. -0.00mm
3 <b>Water Absorption %</b>	ISO 10545-3:2018	Ev ≤ 0.5 % Individual maximum 0.6%	Average - 0.069% Maximum 0.096%
4 <b>Breaking Strength in N</b>	ISO 10545-4:2019	Not less than 1300 Thickness ≥ 7.5 mm	Average -2094.99 N Minimum 2038.65 N
4 <b>Modulus of Rupture (MOR)</b>	ISO 10545-4:2019	Minimum 35 Individual minimum 32	Average 54.91 N/mm <sup>2</sup> Minimum 52.12 N/mm <sup>2</sup>

#### Notes -

- All inspection are carried out conscientiously to the best of our knowledge and ability.
- This report shall not be reproduced, except in full, without the prior written approval from the issuing laboratory.
- The result in this report apply to the sample only.

Tested by

Nimesh Kavar ( Testing Eng. )

Checked &amp; Verified By

Aritra Bera ( Testing Eng. )

Reviewed &amp; Approved By

Jerambhai Kavar( QM/TM )

End of the Test Report

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#### TEST REPORT

Page 1 of 4

Name of Company  
Company Address

Tile Merchant,  
Dockrells Complex, Ballymount Rd Upper, Ballymount, Dublin 24, Rep. of Ireland

Name and Identity of test sample Job Card No:-NCL/2022/D and P/252A

Receive Date 15th Dec 2022

Date of Test 15/12/2022 to 26/12/2022 (dd/mm/yy)

Type Dry Press Ceramic Tiles with low water absorption  $E_v \leq 0.5\%$  Group BI a  
Nominal size ( N ) 1200X600 mm ( Rectified )  
Work Size ( Sw ) 1200x600x8.75 mm ( Rectified )  
Nature of surface Glazed ( GL. )  
Party Given description Porcelain Glazcd Vitrified Tiles(PGVT) Polish  
Received Box ICON

Quantity of sample 06 Pieces.  
Reference Test standard ISO 13006:2018 - Annex G , Dry Press Ceramic Tiles with low water absorption ( $E_v \leq 0.5\%$ )  
Group BI a  
No of pages of the report 4 page

Test Standard ISO 13006:2018 Ceramic tiles - Definitions , classification , characteristic and marking  
Annex G Dry pressed ceramic tiles  $E_v \leq 0.5\%$  Group BI a

	Test Name	Standard No. for test method
1	Length	ISO 10545 - 2 : 2018
2	Straightness of side	ISO 10545 - 2 : 2018
3	Rectangularity	ISO 10545 - 2 : 2018
4	Surface Flatness	ISO 10545 - 2 : 2019
a	Centre curvature	ISO 10545 - 2 : 2018
b	Edge curvature	ISO 10545 - 2 : 2018
c	Warpage	ISO 10545 - 2 : 2018
5	Surface Quality	ISO 10545 - 2 : 2018
6	Resistance to Surface Abrasion	ISO 10545 - 7 : 2007
7	Coefficient of Linear Thermal Expansion	ISO 10545 - 8 : 2016
8	Thermal Shock Resistance	ISO 10545 - 9 : 2016
9	Crazing Resistance	ISO 10545 - 11 : 2007
10	Frost Resistance	ISO 10545 - 12 : 2007
11	Moisture Expansion mm/m	ISO 10545 - 10 : 2006
12	Small colour differences	ISO 10545 - 16 : 2014
13	Impact Resistance	ISO 10545 - 5 : 2006
14	Bulk Density , in ( g/cc )	ISO 10545 - 3 : 2018
15	Resistance to Stain	ISO 10545 - 14 : 2016
16	Resistance To Low Concentration of Acid & Alkali	ISO 10545 - 13 : 2018
17	Resistance To High Concentration of Acid & Alkali	ISO 10545 - 13 : 2018
18	Resistance to house chemical	ISO 10545 - 13 : 2018
19	Resistance to swimming pool salt	ISO 10545 - 13 : 2018
20	Lead and Cadium Release in mg/dm <sup>2</sup>	ISO 10545 - 15 : 2006

Tested by  
Nimesh Kavar ( Testing Eng. )

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Aritra Bera ( Testing Eng. )

Reviewed & Approved By  
Jerambhai Kavar( QM/TM )

26/12/2022

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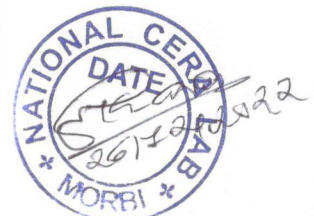
Date :

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Issue date of report

Dec. 26. 2022  
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Kind Of Test		Test Method	TEST REPORT	
			Requirements as per ISO	Result
<b>Dimensions and Surface Quality</b>			<b>13006:2018 Annex G</b>	
1 <b>Length</b> The deviation in mm of the average size of each tile ( 2 sides ) from the work size		ISO 10545-2:2018	<b>N ≥ 15 cm Whichever is less is applicable</b>	
			±0.3%	
			±1 mm	Aveg. 0.01%
				Aveg. - 0.00%
				Aveg. 0.09mm
				Aveg. - 0.00mm
<b>2 Straightness of sides, The maximum deviation from straightness related to the corresponding work size</b>				
Length		ISO 10545-2:2018	±0.3%	Max 0.04%
				Max - 0.04%
			±0.8 mm	Max 0.44mm
Width		ISO 10545-2:2018	±0.3%	Max 0.42mm
				Max 0.05%
			±0.8 mm	Max - 0.05%
				Max 0.28mm
				Max - 0.29mm
<b>3 Rectangularity, The maximum deviation from rectandarity related to the corresponding work size</b>				
Length		ISO 10545-2:2018	±0.3%	Max 0.05%
				Max - 0.05%
			±1.5 mm	Max 0.59mm
Width		ISO 10545-2:2018	±0.3%	Max - 0.58mm
				Max 0.06%
			±1.5 mm	Max - 0.06%
				Max 0.36mm
				Max - 0.35mm
<b>4 Surface Flatness The maximum deviation from flatness</b>				
<b>a Centre curvature related to diagonal calculated from the work size</b>				
Length		ISO 10545-2:2018	±0.4%	Max 0.03%
				Max - 0.00%
			±1.8 mm	Max 0.52mm
Width		ISO 10545-2:2018	±0.4%	Max - 0.00mm
				Max 0.04%
			±1.8 mm	Max - 0.00%
				Max 0.34mm
				Max - 0.00mm
<b>b Edge curvature related to the corresponding work size</b>				
Length		ISO 10545-2:2018	±0.4%	Max 0.03%
				Max - 0.00%
			±1.8 mm	Max 0.52mm
Width		ISO 10545-2:2018	±0.4%	Max - 0.00mm
				Max 0.04%
			±1.8 mm	Max - 0.00%
				Max 0.34mm
				Max - 0.00mm
<b>c Warpage related to diagonal calculated from the work size</b>				
Length		ISO 10545-2:2018	±0.4%	Max 0.03%
				Max - 0.00%
			1.8 mm	Max 0.59mm
Width		ISO 10545-2:2018	±0.4%	Max - 0.00mm
				Max 0.04%
			±1.8 mm	Max - 0.00%
				Max 0.38mm
				Max - 0.00mm



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Kind Of Test	Test Method	Requirements	Result
5 Surface Quality	ISO 10545-2:2018	Minimum 95% of tile are to be free from visible defects which impair the appearance of major area of tiles.	100%
6 Resistance to Surface Abrasion b) Resistance to surface abrasion of glazed tiles	ISO 10545-7:2007	Report abrasion class and cycles passed	Class - IV 2100 Revolution pass
7 Coefficient of Linear Thermal Expansion from ambient temperature to 100°C	ISO 10545-8:2016	9X10 <sup>-6</sup> Max	4.83x10 <sup>-6</sup>
8 Thermal Shock Resistance	ISO 10545-9:2016	Test method available	Fully resistance
9 Craze Resistance	ISO 10545-11:2007	Two cycle must pass Test method available	Fully resistance
10 Frost resistance	ISO 10545-12:2007	Required	N/A
11 Moisture Expansion mm/m	ISO 10545-10:2006	Test method available	0.006 mm/m
12 Small colour differences	ISO 10545-16:2014	Plain coloured tiles only where required GL: Δ < 0.75	N/A
13 Impact Resistance Coefficient of restitution (COR)	ISO 10545-5:2006	Test method available	0.85
14 Bulk Density , in ( g/cc )	ISO 10545-3:2018	2.2 min	2.2974 g/cc
15 Resistance to staining			
Green stain in light oil Red stain in light oil Iodine , 13g/L in alcohol Olive oil	ISO 10545-14:2016	Min Class - 3 Min Class - 3 Min Class - 3 Min Class - 3	Class 4 Class 4 Class 4 Class 5
16 Resistance to Low Concentration of Acid & Alkali			
a Hydrochloric Acid solution 3% v/v b Citric Acid Soln. 100gm/L c Potassium Hydroxide Soln. 30gm/l	ISO 10545-13:2018	Manufacturer to state classification Manufacturer to state classification Manufacturer to state classification	GLA GLA GLA
17 Resistance to High Concentration of Acid & Alkali			
a Hydrochloric Acid solution 18% v/v b Lactic acid 5% v/v c Potassium Hydroxide Soln. 100gm/l	ISO 10545-13:2018	Test method available Test method available Test method available	GHA GHA GHB



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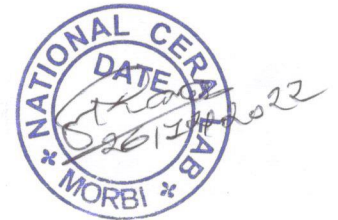
#### TEST REPORT

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	Kind Of Test	Test Method	Requirements	Result
18	House hold chemical resistance Ammonium chloride solution 100gm/L	ISO 10545-13:2018	Minimum Class B	GA
19	Swimming pool salt : Sodium Hypochorite solution 20mg/L		Minimum Class B	GA
20	<b>Lead And Cadmium Releas</b>			
a	Lead release, in mg/dm <sup>2</sup>	ISO 10545-15:2006	Test method available	0.008mg/dm <sup>2</sup>
b	Cadmium release , in mg/dm <sup>2</sup>	ISO 10545-15:2006	Test method available	0.004mg/dm <sup>2</sup>

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