



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 Vitrified Tile /ISO/12/332/2022-23
URL NO. URL - TC626522000000257F

Issue date of report Dec. 26. 2022

TEST REPORT

Page 1 of 2

Name of Company **Tile Merchant,**
Company Address 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/251**

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 $E \leq 0.5\%$ Group BI a
Nominal size (N) 600X600 mm (Rectified)
Work Size (Sw) 600x600x8.00 mm (Rectified)
Nature of surface Glazed (GL)
Party Given description Glazed Vitrified Tiles (GVT) Matt Surface
Received Box **ICON**

Quantity of sample 15 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

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

	Test Name	Standard No. for test method
1	Determination of Dimensions & Surface Quality	ISO 10545 - 2 : 2019
A	Length and Width	ISO 10545 - 2 : 2019
B	Thickness	ISO 10545 - 2 : 2019
C	Straightness of side	ISO 10545 - 2 : 2019
D	Rectangularity	ISO 10545 - 2 : 2019
2	Surface Flatness	ISO 10545 - 2 : 2019
a	Centre curvature	ISO 10545 - 2 : 2019
b	Edge curvature	ISO 10545 - 2 : 2019
3	Determination Water Absorption in %	ISO 10545 - 3 : 2018
4	Determination of Breaking Strength in N, & Modulus of Rupture N/mm ³	ISO 10545 - 4 : 2019

Tested by

N J Kavar

Nimesh Kavar (Testing Eng.)

Checked & Verified By

A Bera

Aritra Bera (Testing Eng.)

Reviewed & Approved By

A Bera
26/12/2022

Jerambhai Kavar(QM/TM)



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Kind Of Test	Test Method	Requirements	Result
1 Dimensions and Surface Quality		N ≥ 15 cm Whichever is less is applicable	
A Length & Width The deviation in mm of the average size of each tile (2 sides) from the work size	ISO 10545-2:2019	±0.3% ±1 mm	Aveg. 0.03% Aveg. -0.00% Avg. 0.18mm Avg. -0.00mm
B Thickness Party declared 8.00 mm The deviation in mm of the average thickness of 10 tile from the work size thickness	ISO 10545-2:2019	±5% ±0.5 mm	Aveg. 0.08% Aveg. -0.00% Avg. 0.01mm Avg. -0.00mm
C Straighthness of Sides The maximum deviation from straighthness related to the corresponding work size			
Length & Width	ISO 10545-2:2019	±0.3% ±0.8 mm	Max 0.05% Max - 0.05% Max 0.27mm Max 0.29mm
D Rectangularity The maximum deviation from straighthness related to the corresponding work size			
Length & Width	ISO 10545-2:2019	±0.3% ±1.5 mm	Max 0.06% Max - 0.06% Max 0.34mm Max - 0.37mm
2 Surface Flatness The maximum deviation from flatness			
a) Centre curvature related to diagonal calculated from the work size.			
Length & Width	ISO 10545-2:2019	±0.4% ±1.8 mm	Max 0.04% Max - 0.00% Max 0.35mm Max - 0.00mm
b) Edge curvature related to the corresponding work size.			
Length & Width	ISO 10545-2:2019	±0.4% ±1.8 mm	Max 0.06% Max - 0.00% Max 0.36mm Max - 0.00mm
3 Water Absorption %	ISO 10545-3:2018	Ev ≤ 0.5 % Individual maximum 0.6%	Average 0.060% Maximum 0.087%
4 Breaking Strength in N	ISO 10545-4:2019	Not less than 1300 Thickness ≥ 7.5 mm	Average 1604.56 N Minimum 1491.08 N
4 Modulus of Rupture (MOR)	ISO 10545-4:2019	Minimum 35 Individual minimum 32	Average 46.88 N/mm ³ Minimum 44.62 N/mm ³

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 & Verified By
Aritra Bera (Testing Eng.)
End of the test report

Reviewed & Approved By
Jerambhai Kavar(QM/TM)

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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/251A

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 $E \leq 0.5\%$ Group BI a

Nominal size (N)

600X600 mm (Rectified)

Work Size (Sw)

600x600x8.00 mm (Rectified)

Nature of surface

Glazed (GL)

Party Given description

Glazed Vitrified Tiles (GVT) Matt Surface

Received Box

ICON

Quantity of sample

15 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

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Test Standard

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

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

Tested by

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26/12/2022

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Kind Of Test	Test Method	Requirements	Result
1 Surface Flatness The maximum deviation from flatness			
Warpage related to diagonal calculated from the work size.		N ≥ 15 cm Whichever is less is applicable	
Length & With	ISO 10545-2:2019	±0.4%	Max 0.04%
			Max - 0.00%
		±.1.8 mm	Max 0.36mm
			Max - 0.00mm
2 Surface Quality	ISO 10545-2:2019	Minimum 95% of tile shall be free from visible defects that would impair the appearance of a major area of tiles.	100%
3 Resistance to Surface Abrasion			
b) Resistance to deep abrasion of unglazed tiles removed volume,	ISO 10545-6:2014	Report abrasion class and cycles passed	Class - V 12000 rpm pass Stain pass ISO 10545-14
4 Coefficient of Liner Thermal Expansion from ambient temperature to 100°C	ISO 10545-8:2016	9X10 ⁻⁶ Max	4.74x10 ⁻⁶
5 Thermal Shock Resistance	ISO 10545-9:2016	Test method available	Fully resistance
6 Crazing Resistance	ISO 10545-11:2007	Two cycle must pass	Fully resistance
7 Frost resistance	ISO 10545-12:2007	Required	n/a
8 Moisture Expansion mm/m	ISO 10545-10:2006	Test method available	0.004 mm/m
9 Small colour differences	ISO 10545-16:2014	Plain coloured tiles only where required GL: Δ < 0.75	N/A
10 Impact Resistance Coefficient of restitution (COR)	ISO 10545-5:2006	Test method available	0.83



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Kind Of Test	Test Method	Requirements	Result
11 Bulk Density , in (g/cc)	ISO 10545-3:2018	2.2 min	2.2974 g/cc
Chemical Properties			
13 Resistance to staining			
a) Green stain in light oil b) Red stain in light oil c) Iodine , 13g/L in alcohol d) Olive oil	ISO 10545-14:2016	Min Class - 3 Min Class - 3 Min Class - 3 Min Class - 3	Class 5 Class 5 Class 5 Class 5
14 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
15 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
16 House hold chemical resistance Ammonium chloride solution 100gm/L	ISO 10545-13:2018	Minimum Class B	GA
17 Swimming pool salt : Sodium Hypochorite solution 20mg/L		Minimum Class B	GA
18 Lead And Cadmium Releas			
Lead release, in mg/dm ²	ISO 10545-15:2006	Test method available	0.011mg/dm ²
Cadmium release , in mg/dm ²	ISO 10545-15:2006	Test method available	0.008mg/dm ²



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