



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.

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E-mail : nationalceralab@rediffmail.com

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

Ref. No.

Report no NCL/Glazed Vitrified Tile /ISO/12/334/2022-23
URL NO. URL - TC626522000000259F

Date :

Issue date of report Dec. 26. 2022

TEST REPORT

Page 1 of 3

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/253

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 (MATT)
Received Box ICON

Quantity of sample 10 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 3 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 : 2019
A	Width	ISO 10545 - 2 : 2019
B	Thickness	ISO 10545 - 2 : 2019
2	Determination Water Absorption in %	ISO 10545 - 3 : 2018
3	Determination of Breaking Strength in N, & Modulus of Rupture N/mm ³	ISO 10545 - 4 : 2019

Tested by

Nimesh Kavar (Testing Eng.)

Checked & Verified By

Aritra Bera (Testing Eng.)

Reviewed & Approved By

Jerambhai Kavar(QM/TM)



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	Kind Of Test	Test Method	Requirements as per	Result
	Dimensions and Surface Quality		ISO 13006:2018 Annex G N ≥ 15 cm Whichever is less is applicable	
1	Width The deviation in mm of the average size of each tile (2 sides) from the work size	ISO 10545-2:2018	±0.3%	Aveg. 0.03%
			±1 mm	Aveg. - 0.00%
				Avg. 0.16mm
				Avg.- 0.00mm
2	Thickness 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. 0.00%
				Aveg. -0.99%
			±0.5 mm	Avg. 0.00mm
				Avg. -0.09mm
3	Water Absorption %	ISO 10545-3:2018	Ev ≤ 0.5 % Individual maximum 0.60%	Average 0.073% Maximum 0.082%
4	Breaking Strength in N	ISO 10545-4:2019	Not less than 1300 Thickness ≥ 7.5 mm	Average 2230.93 N Minimum 2159.60 N
4	Modulus of Rupture (MOR)	ISO 10545-4:2019	Minimum 35 Individual minimum 32	Average 57.22 N/mm ² Minimum 55.64 N/mm ²

Notes -

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

Tested by

Nimesh Kavar (Testing Eng.)

Checked & Verified By

Aritra Bera (Testing Eng.)

Reviewed & 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/253A

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.)

Partly Given description

Glazed Vitrified Tiles (MATT)

Received Box

ICON

Quantity of sample

10 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

3 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 : 2018
a Centre curvature	ISO 10545 - 2 : 2019
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 - 2 : 2018
7 Coefficient of Linear Thermal Expansion	ISO 10545 - 7 : 2007
8 Thermal Shock Resistance	ISO 10545 - 8 : 2016
9 Craze Resistance	ISO 10545 - 9 : 2016
10 Frost Resistance	ISO 10545 - 11 : 2007
11 Moisture Expansion mm/m	ISO 10545 - 12 : 2007
12 Small colour differences	ISO 10545 - 10 : 2006
13 Impact Resistance	ISO 10545 - 16 : 2014
14 Bulk Density , in (g/cc)	ISO 10545 - 5 : 2006
15 Resistance to Stain	ISO 10545 - 3 : 2018
16 Resistance To Low Concentration of Acid & Alkali	ISO 10545 - 14 : 2016
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 Cadmium Release in mg/dm ²	ISO 10545 - 13 : 2018
	ISO 10545 - 15 : 2006

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Kind Of Test		Test Method	TEST REPORT	
			Requirements as per	Result
Dimensions and Surface Quality			ISO 13006:2018 Annex G	
Length			N ≥ 15 cm Whichever is less is applicable	
1	The deviation in mm of the average size of each tile (2 sides) from the work size	ISO 10545-2:2018	±0.3%	
				Aveg. 0.01%
			±1 mm	Aveg. - 0.00%
				Aveg. 0.14mm
				Aveg.- 0.00mm
Straightness of sides, The maximum deviation from straightness related to the corresponding work size				
2	Length	ISO 10545-2:2018	±0.3%	Max 0.04%
				Max - 0.04%
			±0.8 mm	Max 0.43mm
				Max 0.42mm
				Max 0.05%
	Width	ISO 10545-2:2018	±0.3%	Max 0.05%
				Max - 0.05%
			±0.8 mm	Max 0.29mm
				Max - 0.30mm
				Max - 0.30mm
Rectangularity, The maximum deviation from rectandularity related to the corresponding work size				
3	Length	ISO 10545-2:2018	±0.3%	Max 0.05%
				Max - 0.05%
			±1.5 mm	Max 0.56mm
				Max - 0.57mm
				Max 0.06%
	Width	ISO 10545-2:2018	±0.3%	Max 0.06%
				Max - 0.06%
			±1.5 mm	Max 0.35mm
				Max - 0.37mm
				Max - 0.37mm
Surface Flatness The maximum deviation from flatness				
4 Centre curvature related to diagonal calculated from the work size				
a	Length	ISO 10545-2:2018	±0.4%	Max 0.03%
				Max - 0.00%
			±1.8 mm	Max 0.53mm
				Max - 0.00mm
				Max 0.04%
	Width	ISO 10545-2:2018	±0.4%	Max - 0.00%
				Max - 0.00%
			±1.8 mm	Max 0.36mm
				Max - 0.00mm
				Max - 0.00mm
Edge curvature related to the corresponding work size				
b	Length	ISO 10545-2:2018	±0.4%	Max 0.05%
				Max - 0.00%
			±1.8 mm	Max 0.58mm
				Max - 0.00mm
				Max 0.07%
	Width	ISO 10545-2:2018	±0.4%	Max - 0.00%
				Max - 0.00%
			±1.8 mm	Max 0.41mm
				Max - 0.00mm
				Max - 0.00mm
Warpage related to diagonal calculated from the work size				
c	Length	ISO 10545-2:2018	±0.4%	Max 0.03%
				Max - 0.00%
			1.8 mm	Max 0.53mm
				Max - 0.00mm
				Max 0.04%
	Width	ISO 10545-2:2018	±0.4%	Max - 0.00%
				Max - 0.00%
			±1.8 mm	Max 0.34mm
				Max - 0.00mm
				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 - V 12000 Revolution pass Stain Pass
7	Coefficient of Linear Thermal Expansion from ambient temperature to 100°C	ISO 10545-8:2016	9X10 ⁻⁶ Max	4.81x10 ⁻⁶
8	Thermal Shock Resistance	ISO 10545-9:2016	Test method available	Fully resistance
9	Crazing Resistance	ISO 10545-11:2007	Two cycle must pass Test method available	Fully resistance
10	Frost resistance	ISO 10545-12:2007	Required	Fully resistance
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	2.2964 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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	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 Hypochlorite solution 20mg/L		Minimum Class B	GA
20	Lead And Cadmium Releas			
a	Lead release, in mg/dm ²	ISO 10545-15:2006	Test method available	0.008mg/dm ²
b	Cadmium release , in mg/dm ²	ISO 10545-15:2006	Test method available	0.004mg/dm ²

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