NABLACCREDITATION LAB

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

**Ref. No.** **Date :**

**Report no** NCL/Glazed Vitrified Tile /ISO/02/502/2021-22
**URL NO.** URL - TC626522000000091F

**Issue date of report** Feb. 26. 2022

**TEST REPORT**



| | |
|---|---|
| Name of Company<br>Company Address | **TILE MERCHANT**<br>Dockrell's Complex Ballymount Road Upper<br>Dublin 24 Rep. of Ireland |
| Name and Identity of test sample | **Job Card No:-NCL/2022/D and P/088** |
| Receive Date | 12nd Feb. 2022 |
| Date of Test | 22/02/2022 to 26/02/2022 (dd/mm/yy) |
| Type<br>Nominal size ( N )<br>Work Size ( Sw )<br>Nature of surface<br>Party Given descriprtion<br>Received Box | Dry Press Ceramic Tiles with low water absorption Ev ≤ 0.5% Group BI a<br>1000X1000 mm ( Rectified )<br>1000x1000x9.0 mm ( Rectified )<br>Glazed ( GL. )<br>Glazed Vitrified Tiles "High Glossy" |
| Quantity of sample<br>Referance Test standard | 10 Pieces.<br>ISO 13006:2018 - Annex G , Dry Press Ceramic Tiles with low water absorption (E≤ 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<br>Annex G Dry pressed ceramic tiles Ev ≤ 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 - 3 : 2018 |
| 3 | Determination Water Absorption in % | ISO 10545 - 4 : 2019 |
| 4 | Determination of Breaking Strendth in N, & Modulus of Rupture N/mm² | |

Tested by

Nimesh Kavar (Testing Engg.)

Inspected by

Jerambhai Kavar ( TM )

Approved by QM/TM (Jerambhai Kavar)

Authorised signatory (Jerambhai Kavar)

26/2/2022

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| | Kind Of Test | Test Method | Requirements | | Result | Verdicts |
|---|---|---|---|---|---|---|
| 1 | **Dimensions and Surface Quality** | | Whichever is less is applicable | | | |
| A | **Length and Width**<br>The deviation in mm of the average size of each tile ( 2 sides ) from the work size | ISO 10545-2:2019 | N≥15cm | ±0.3% | Aveg. 0.01% | P |
| | | | | | Aveg. - 0.00% | |
| | | | | ±1 mm | Aveg. 0.14mm | P |
| | | | | ±1 mm | Aveg. - 0.00mm | |
| B | **Thickness** Party declare 9.mm<br>The deviation in mm of the average thickness of 10 tile from the work size thickness | ISO 10545-2:2019 | N≥15cm | ±5% | Aveg. 0.00% | |
| | | | | | Aveg. -1.80% | P |
| | | | | ±0.5 mm | Avg. 0.00mm | |
| | | | | | Avg. -0.16mm | P |
| C | **Straigthness of Sides**<br>The maximum deviation from straigthness related to the corresponding work size | | | | | |
| | **Length and Width** | ISO 10545-2:2019 | N≥15cm | ±0.3% | Max 0.03% | P |
| | | | | | Max - 0.03% | P |
| | | | | ±.0.8 mm | Max 0.38mm | P |
| | | | | ±.0.8 mm | Max 0.39mm | P |
| D | **Rectangularity** | | | | | |
| | The maximum deviation from straigthness related to the corresponding work size | | | | | |
| | **Length and Width** | ISO 10545-2:2019 | N≥15cm | ±0.3% | Max 0.03% | P |
| | | | | | Max - 0.04% | P |
| | | | | ±.0.8 mm | Max 0.40mm | P |
| | | | | | Max - 0.42mm | P |
| 2 | **Surface Flatness** The maximum deviation from flatness | | | | | |
| | a) Centre curvature related to diagonal calculated from the work size. | | | | | |
| | **Length and Width** | ISO 10545-2:2019 | N≥15cm | ±0.4% | Max 0.03% | P |
| | | | | | Max - 0.00% | |
| | | | | ±.1.8 mm | Max 0.45mm | P |
| | | | | | Max - 0.00mm | |
| | b) Edge curvature related to the corresponding work size. | | | | | |
| | **Length and Width** | ISO 10545-2:2019 | N≥15cm | ±0.4% | Max 0.04% | P |
| | | | | | Max - 0.00% | |
| | | | | ±.1.8 mm | Max 0.44mm | P |
| | | | | | Max - 0.00mm | |
| 3 | **Water Absorption %** | ISO 10545-3:2018 | Ev ≤ 0.5 %<br>Individual maximum 0.6% | | Average - 0.082%<br>Maximum - 0.087% | P |
| 4 | **Breaking Strength in N** | ISO 10545-4:2019 | Not lass than 1300<br>Thickness ≥ 7.5 mm | | Average - 2065.93 N<br>Minimum - 1823.30 N | P |
| 4 | **Modulus of Rupture (MOR)** | ISO 10545-4:2019 | Minimum 35<br>Individual minimum 32 | | Average- 44.58.N/mm<br>Minimum-38.58N/mm | P |

End of the Test Report

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 writeen approval from the issuing laboratory.
3 The result in this report apply to the sample only.

Tested by

Nimesh Kavar (Testing Eng)

Inspected by

Jerambhai Kavar ( TM )

Approved by QM/TM (Jerambhai Kavar)

Authorised signatory (Jerambhai Kavar)

26/2/2022

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

**Ref. No.** **Date :**

**Report no** NCL/Glazed Vitrified Tile /ISO/02/502A/2021-22 **Issue date of report** Feb. 26. 2022

**TEST REPORT**



| | |
|---|---|
| Name of Company<br>Company Address | **M/s ROLLZA GRANITO LLP**<br>At - Sanala Talaviya, Survey No. 11p1, 11p2, 113,Unchi Mandal Talaviya Sanala Road,<br>Dist - Morbi, Gujarat, India |
| Name and Identity of test sample | Ceramic Tiles/ NCL/2022/D and P/088A |
| Receive Date | 12nd Feb. 2022 |
| Date of Test | 22/02/2022 to 26/02/2022 (dd/mm/yy) |
| Type<br>Nominal size ( N )<br>Work Size ( Sw )<br>Nature of surface<br>Party Given descriprtion<br>Received Box | Dry Press Ceramic Tiles with low water absorption Ev ≤ 0.5% Group BI a<br>1000X1000 mm ( Rectified )<br>1000x1000x9.0 mm ( Rectified )<br>Glazed ( GL. )<br>Glazed Porcelain Tiles |
| Quantity of sample<br>Referance Test standard | 30 Pieces.<br>ISO 13006:2018 - Annex G , Dry Press Ceramic Tiles with low water absorption (E≤ 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<br>Annex G Dry pressed ceramic tiles Ev ≤ 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 | Crazing 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 : 2016 |
| 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 Cadium Release in mg/dm² | ISO 10545 - 15 : 2006 |

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Tested by

Nimesh Kavar (Testing Eng)

Inspected by

Jerambhai Kavar (T.M.)

Approved by QM/TM (Jerambhai Kavar)

Authorised signatory (Jerambhai Kavar)

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TEST REPORT 

| | Kind Of Test | Test Method | Requirements | | Result | Verdicts |
|---|---|---|---|---|---|---|
| 1 | **Surface Flatness** The maximum deviation from flatness | | | | | |
| | Warpage related to diagonal calculated from the work size. | | | | | |
| | **Length and Width** | ISO 10545-2:2019 | N≥15cm | ±0.4% | Max 0.03% | P |
| | | | | | Max - 0.00% | |
| | | | | ±.1.8 mm | Max 0.45mm | P |
| | | | | | Max - 0.00mm | |
| 2 | **Surface Quality** | ISO 10545-2:2019 | Maximum 95% of tile shall be free from visible defects inspected vertically at 1.0 m | | 100% | P |
| 3 | **Resistance to Surface Abrasion** a) Resistance to surface abrasion of glazed tiles | ISO 10545-7:2007 | Report abrasion class and cycles passed | | Class - III 1500 Revolution pass | P |
| 4 | **Coefficient of Liner Thermal Expansion** from ambient temperature to 100°c | ISO 10545-8:2016 | 9X10¯6 Max | | 5.54x10¯6 | P |
| 5 | **Thermal Shock Resistance** | ISO 10545-9:2016 | Test method available | | Fully resistance | P |
| 6 | **Crazing Resistance** | ISO 10545-11:2007 | Two cycle must pass | | Fully resistance | P |
| 7 | **Frost resistance** | ISO 10545-12:2007 | Required | | Fully resistance | N/A |
| 8 | **Moisture Expansion mm/m** | ISO 10545-10:2006 | Test method available | | 0.01 mm/m | P |
| 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 | | 0.68 | P |
| 11 | **Bulk Density , in ( g/cc )** | ISO 10545-3:2018 | 2.2 min | | 2.2933 g/cc | P |
| | **Chemical Properties** | | | | | |
| 12 | **Resistance to staining** | | | | | |
| | a) Green stain in light oil | ISO 10545-14:2016 | Min Class - 3 | | Class 5 | P |
| | b) Red stain in light oil | | Min Class - 3 | | Class 5 | P |
| | c) Iodine , 13g/L in alcohol | | Min Class - 3 | | Class 4 | P |
| | d) Olive oil | | Min Class - 3 | | Class 5 | P |

26/2/2022

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TEST REPORT



| | Kind Of Test | Test Method | Requirements | Result | Verdicts |
|---|---|---|---|---|---|
| 13 | **Resistance to Low Concentration of Acid & Alkali** | | | | |
| | a) Hydrochloric Acid solution 3% v/v | ISO 10545-13:2018 | Manufacturer to state classification | GLA | P |
| | b) Citric Acid Soln. 100gm/L | | Manufacturer to state classification | GLA | P |
| | c) Potassium Hydroxide Soln. 30gm/L | | Manufacturer to state classification | GLA | P |
| 14 | **Resistance to High Concentration of Acid & Alkali** | | | | |
| | a) Hydrochloric Acid solution 18% v/v | ISO 10545-13:2018 | Test method available | GHA | P |
| | b) Lactic acid 5% v/v | | Test method available | GHA | P |
| | c) Potassium Hydroxide Soln. 100gm/L | | Test method available | GHB | P |
| 15 | House hold chemical resistance Ammonium chloride solution 100gm/L | ISO 10545-13:2018 | Minimum Class B | GA | P |
| 16 | Swimming pool salt : Sodium Hypochorite solution 20mg/L | | Minimum Class B | GA | P |
| 17 | **Lead And Cadmium Releas** | | | | |
| | Lead release, in mg/dm² | ISO 10545-15:2006 | Test method available | 0.004mg/dm² | P |
| | Cadmium release , in mg/dm² | ISO 10545-15:2006 | Test method available | 0.004mg/dm² | P |

Possible test case verdicts
1 P(ass) ; Test item does meet the requirement
2 F(Fail) : Test item does not meet the requirement.
3 N/A : Test case does not apply to the item.

End of the Test Report

26/2/2022