

EVALUATED CHARACTERISTICS	TEST METHOD	NORM ISO 13006 REQUIREMENTS (BIIB)	RESULT	CONCLUSION
<b>DIMENSIONS AND SURFACE QUALITY</b>				
* Length and Width, mm Manufacturing Size: 451.0 mm Average Size: 452.1 mm	ISO 10545-2	± 0.6%; ± 2.0mm	(%)      (mm) 0.24      1.10	Comply
* Thickness, mm Manufacturing: 7.5 mm Average result: 7.6 mm	ISO 10545-2	± 5.0%; ± 0.5mm	1.33      0.10	Comply
* Straightness of sides, %	ISO 10545-2	± 0.5%; ± 1.5mm	0.04      0.20	Comply
* Rectangularity, %	ISO 10545-2	± 0.5%; ± 2.0mm	-0.11      -0.50	Comply
* Surface flatness Edge curvature, % Centre curvature, % Warpage, %	ISO 10545-2 ISO 10545-2 ISO 10545-2	± 0.5%; ± 2.0mm ± 0.5%; ± 2.0mm ± 0.5%; ± 2.0mm	0.18   0.00   0.80   0.00 0.20   0.00   1.30   0.00 0.16   -0.03   1.00   -0.20	Comply Comply Comply
* Surface quality, %	ISO 10545-2	A minimum of 95 % of the tiles are to be free from visible defects which can impair the appearance of a major area of tiles	98.1%	Comply
<b>PHYSICAL PROPERTIES</b>				
* Water absorption (E <sub>v</sub> ), %	ISO 10545-3	6 % < E <sub>v</sub> ≤ 10 % Individual maximum 11 %	7.2 7.3	Comply Comply
* Breaking strength, N (Thickness ≥ 7.5 mm)	ISO 10545-4	Not less than 800	1012	Comply
* Modulus of rupture, N/mm <sup>2</sup>	ISO 10545-4	Minimum 18 Individual minimum 16	30 29	Comply Comply
* Abrasion resistance - CU	ISO 10545-7	Report abrasion class and cycles passed	Class 3 Cycles 1500	-
* Crazeing resistance	ISO 10545-11	Required	No crazeing	Comply
<b>CHEMICAL PROPERTIES</b>				
* Resistance to staining - Green Oxide - Iodo - Olive oil	ISO 10545-14 ISO 10545-14 ISO 10545-14	Minimum class 3 Minimum class 3 Minimum class 3	Class 5 Class 5 Class 5	Comply Comply Comply
* Resistance to low concentrations of acids and alkalis - 3% Hydrochloric Acid (V / V) - Potassium hydroxide, 30 g / l		Manufacturer is to state classification	LB LA	- -
* Resistance to high concentrations of acids and alkalis - 18% Hydrochloric Acid (V / V) - Potassium hydroxide, 100 g / l	ISO 10545-13	Test method available	HB HA	- -
* Resistance to household chemicals and swimming pool salts - Ammonium Chloride 100 g / l - Sodium hypochlorite, 20 mg / l	ISO 10545-13	Minimum B	A A	Comply Comply
<p>Requirements verified as indicated in the INTERNATIONAL STANDARD, ISO 13006            "Ceramic Tiles - Definitions, Classification, Characteristics and marking", Annex k (normative), Table k,1.            Dry-pressed ceramic tiles 6 % &lt; E<sub>v</sub> ≤ 10 % Group BIIB<sub>6</sub>            The weight, tone and dimensions are subject to some of the inevitable variations typical of ceramic firing processes.</p>				
<b>DATE OF ISSUE</b>			Thursday, September 30, 2021	
<b>Prepared by: Quality Supervisor</b>			<b>Reviewed by: Manager Quality Assurance</b>	
César Prado R.			Marlene Chauca R.	

EVALUATED CHARACTERISTICS	TEST METHOD	NORM ISO 13006 REQUIREMENTS (BIIB)	RESULT	CONCLUSION
<b>DIMENSIONS AND SURFACE QUALITY</b>				
* Length and Width, mm Manufacturing Size: 451.0 mm Average Size: 452.6 mm	ISO 10545-2	± 0.6%; ± 2.0mm	(%)      (mm) 0.35      1.60	Comply
* Thickness, mm Manufacturing: 7.5 mm Average result: 7.7 mm	ISO 10545-2	± 5.0%; ± 0.5mm	2.67      0.20	Comply
* Straightness of sides, %	ISO 10545-2	± 0.5%; ± 1.5mm	0.07      0.30	Comply
* Rectangularity, %	ISO 10545-2	± 0.5%; ± 2.0mm	-0.11      -0.50	Comply
* Surface flatness Edge curvature, % Centre curvature, % Warpage, %	ISO 10545-2 ISO 10545-2 ISO 10545-2	± 0.5%; ± 2.0mm ± 0.5%; ± 2.0mm ± 0.5%; ± 2.0mm	0.18   0.00   0.80   0.00 0.24   0.00   1.50   0.00 0.13   0.00   0.80   0.00	Comply Comply Comply
* Surface quality, %	ISO 10545-2	A minimum of 95 % of the tiles are to be free from visible defects which can impair the appearance of a major area of tiles	97.6%	Comply
<b>PHYSICAL PROPERTIES</b>				
* Water absorption (E <sub>v</sub> ), %	ISO 10545-3	6 % < E <sub>v</sub> ≤ 10 % Individual maximum 11 %	7.6 7.8	Comply Comply
* Breaking strength, N (Thickness ≥ 7.5 mm)	ISO 10545-4	Not less than 800	952	Comply
* Modulus of rupture, N/mm <sup>2</sup>	ISO 10545-4	Minimum 18 Individual minimum 16	27 25	Comply Comply
* Abrasion resistance - CU	ISO 10545-7	Report abrasion class and cycles passed	Class 3 Cycles 1500	-
* Crazeing resistance	ISO 10545-11	Required	No crazeing	Comply
<b>CHEMICAL PROPERTIES</b>				
* Resistance to staining - Green Oxide - Iodo - Olive oil	ISO 10545-14 ISO 10545-14 ISO 10545-14	Minimum class 3 Minimum class 3 Minimum class 3	Class 5 Class 5 Class 5	Comply Comply Comply
* Resistance to low concentrations of acids and alkalis - 3% Hydrochloric Acid (V / V) - Potassium hydroxide, 30 g / l		Manufacturer is to state classification	LB LA	- -
* Resistance to high concentrations of acids and alkalis - 18% Hydrochloric Acid (V / V) - Potassium hydroxide, 100 g / l	ISO 10545-13	Test method available	HB HA	- -
* Resistance to household chemicals and swimming pool salts - Ammonium Chloride 100 g / l - Sodium hypochlorite, 20 mg / l	ISO 10545-13	Minimum B	A A	Comply Comply
<p>Requirements verified as indicated in the INTERNATIONAL STANDARD, ISO 13006            "Ceramic Tiles - Definitions, Classification, Characteristics and marking", Annex k (normative), Table k,1.            Dry-pressed ceramic tiles 6 % &lt; E<sub>v</sub> ≤ 10 % Group BIIB<sub>6</sub>            The weight, tone and dimensions are subject to some of the inevitable variations typical of ceramic firing processes.</p>				
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<b>DIMENSIONS AND SURFACE QUALITY</b>				
* Length and Width, mm			(%)      (mm)	
Manufacturing length: 600.0 mm	ISO 10545-2	± 0.6%; ± 2.0mm	-0.27      -1.60	Comply
Average length: 598.4 mm				
Manufacturing width: 300.0 mm	ISO 10545-2	± 0.6%; ± 2.0mm	-0.31      -0.92	Comply
Average width: 299.1 mm				
* Thickness, mm				
Manufacturing: 9.0 mm	ISO 10545-2	± 5.0%; ± 0.5mm	0.78      0.07	Comply
Average result: 9.1 mm				
* Straightness of sides, %	ISO 10545-2	± 0.5%; ± 1.5mm	0.12      0.70	Comply
* Rectangularity, %	ISO 10545-2	± 0.5%; ± 2.0mm	-0.13      -0.80	Comply
* Surface flatness				
Edge curvature, %				
Length:	ISO 10545-2	± 0.5%; ± 2.0mm	0.17    0.00    1.00    0.00	Comply
Width:	ISO 10545-2	± 0.5%; ± 2.0mm	0.07    0.00    0.20    0.00	Comply
Centre curvature, %	ISO 10545-2	± 0.5%; ± 2.0mm	0.18    0.00    1.20    0.00	Comply
Warpage, %	ISO 10545-2	± 0.5%; ± 2.0mm	0.09    -0.04    0.60    -0.30	Comply
* Surface quality, %	ISO 10545-2	A minimum of 95 % of the tiles are to be free from visible defects which can impair the appearance of a major area of tiles	97.6%	Comply
<b>PHYSICAL PROPERTIES</b>				
* Water absorption ( $E_v$ ), %	ISO 10545-3	6 % < $E_v$ ≤ 10 % Individual maximum 11 %	7.6 7.8	Comply Comply
* Breaking strength, N (Thickness ≥ 7.5 mm)	ISO 10545-4	Not less than 800	1469	Comply
* Modulus of rupture, N/mm <sup>2</sup>	ISO 10545-4	Minimum 18 Individual minimum 16	32 30	Comply Comply
* Abrasion resistance - CU	ISO 10545-7	Report abrasion class and cycles passed	Class 3 Cycles 1500	-
* Craze resistance	ISO 10545-11	Required	No crazing	Comply
<b>CHEMICAL PROPERTIES</b>				
* Resistance to staining				
- Green Oxide	ISO 10545-14	Minimum class 3	Class 5	Comply
- Iodo	ISO 10545-14	Minimum class 3	Class 5	Comply
- Olive oil	ISO 10545-14	Minimum class 3	Class 5	Comply
* Resistance to low concentrations of acids and alkalis				
- 3% Hydrochloric Acid (V / V)		Manufacturer is to state classification	LB	-
- Potassium hydroxide, 30 g / l			LA	-
* Resistance to high concentrations of acids and alkalis	ISO 10545-13			
- 18% Hydrochloric Acid (V / V)		Test method available	HB	-
- Potassium hydroxide, 100 g / l			HA	-
* Resistance to household chemicals and swimming pool salts				
- Ammonium Chloride 100 g / l	ISO 10545-13	Minimum B	A	Comply
- Sodium hypochlorite, 20 mg / l			A	Comply
<p>Requirements verified as indicated in the INTERNATIONAL STANDARD, ISO 13006 "Ceramic Tiles - Definitions, Classification, Characteristics and marking", Annex k (normative), Table k.1.            Dry-pressed ceramic tiles 6 % &lt; <math>E_v</math> ≤ 10 % Group BI<sub>b</sub>            The weight, tone and dimensions are subject to some of the inevitable variations typical of ceramic firing processes.</p>				
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