

## TECHNICAL SHEET GRSPB PDRA MINERAL STONE BEIGE 30X61 EXT 1.67

EVALUATED FEATURE		TEST METHOD	NORM ANSI A137.1 REQUIREMENTS (Table 8)	RES	RESULTS		
		DI	IMENSIONS				
				(%)	(mm)		
* Nominal Size, mm				. ,	. ,		
Nominal length:	610.0 mm						
Manufacturing length:	610.0 mm	ASTM C499	± 3.00%	0.00	0.00	Comply	
Nominal width:	300.0 mm	ASTM C499					
Manufacturing width:	303.0 mm		± 3.00%	1.00	3.00	Comply	
* Caliber Range							
Manufacturing length:	610.0 mm						
Average length:	609.3 mm		± 0.50%; ± 2.00mm	-0.11	-0.70	Comply	
Manufacturing width:	303.0 mm	ASTM C499					
Average width:	303.1 mm		± 0.50%; ± 2.00mm	0.03	0.10	Comply	
-							
* Warpage Edge,%							
Length		ASTM C485	± 0.75%; ± 2.00mm	0.03 -0.04	0.20 -0.22	Comply	
Width				0.00 -0.09	0.00 -0.27	Comply	
* Warpage Diagonal, %		ASTM C485	± 0.50%; ± 2.00mm	0.00 -0.11	0.00 -0.74	Comply	
* Wedging, %		ASTM C502	± 0.50%; ± 2.00mm	0.10 -0.03	0.65 -0.21	Comply	
* Thickness, mm							
Manufacturing:	8.5 mm						
Average result:	8.5 mm	ASTM C499	Max. 1.02 mm	0.00	0.00	Comply	
		PHYSIC	AL PROPERTIES				
* Visible Abrasion Resistance		ASTM C1027	As reported	PE	EI III	-	
* Water Absorption, %		ASTM C373	Vitreous (P2) 0.5%< wa ≤ 3.0%	2.	.80	Comply	
* Crazing Resistance		ASTM C424	Pass	Аррі	roved	Comply	
* Breaking Strength, lbf		ASTM C648	Average ≥ 250	3	93	Comply	
			Individual ≥ 225	3	82	Comply	
* Dynamic coefficient of friction - DC	OF	ANSI A137.1					
Wet		Section 9.6	≥ 0.42	0.	.50	Comply	
		CHEMIC	CAL PROPERTIES				
* Chemical Resistance		ASTM C650	As reported	Res	istant	Comply	
* Stain Resistance		ASTM C1378	As reported	Resi	istant	Comply	
	STANDARD SPE	ECIFICATIONS FOR	D, ANSI A137.1. R CERAMIC TILE / Table 8: Pres of the typical unavoidable varia		ses		
-	OF ISSUE			Tuesday, March	16, 2021		
Prepared by: Quality Supervisor				Reviewed by: Manager Quality Assurance			
Prepared by: (	<b>Duality Supervi</b>	sor	Review	ed by: Manager (	Quality Assura	nce	



## TECHNICAL SHEET GRSPB PDRA MINERAL STONE BEIGE 61X61 EXT 1.48

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EVALUATED FEATURE		TEST METHOD	NORM ANSI A137.1 REQUIREMENTS (Table 8)	RESULTS		CONCLUSION	
		DI	MENSIONS				
				(%)	(mm)		
* Nominal Size, mm							
Nominal Size:	610.0 mm						
Manufacturing Size:	610.0 mm	ASTM C499	± 3.00%	0.00	0.00	Comply	
* Caliber Range							
Manufacturing Size:	610.0 mm	ASTM C499					
Average Size:	609.5 mm	ASTM C499	± 0.50%; ± 2.00mm	-0.08	-0.50	Comply	
* Warpage Edge,%		ASTM C485	± 0.75%; ± 2.00mm	0.03 -0.03	0.20 -0.20	Comply	
* Warpage Diagonal, %		ASTM C485	± 0.50%; ± 2.00mm	0.00 -0.07	0.00 -0.60	Comply	
* Wedging, %		ASTM C502	± 0.50%; ± 2.00mm	0.09 0.00	0.80 0.00	Comply	
* Thickness, mm							
Manufacturing:	8.5 mm						
Average result:	8.9 mm	ASTM C499	Max. 1.02 mm	4.71	0.40	Comply	
		PHYSIC	AL PROPERTIES				
* Visible Abrasion Resistance		ASTM C1027	As reported	PEI III		-	
* Water Absorption, %		ASTM C373	Vitreous (P2) 0.5%< wa ≤ 3.0%	1.80		Comply	
* Crazing Resistance		ASTM C424	Pass	Appr	oved	Comply	
* Breaking Strength, lbf		ASTM C648	Average ≥ 250	39	95	Comply	
			Individual ≥ 225	38	37	Comply	
* Dynamic coefficient of friction - DCOF		ANSI A137.1			10		
Wet		Section 9.6	≥ 0.42	0.49		Comply	
		CHEMIC	AL PROPERTIES			1	
* Chemical Resistance		ASTM C650	As reported	Resi	stant	Comply	
* Stain Resistance		ASTM C1378	As reported	Resi	stant	Comply	
	AL STANDARD SPI	ECIFICATIONS FOR	D, ANSI A137.1. R CERAMIC TILE / Table 8: Pres of the typical unavoidable varia		es		
DA	TE OF ISSUE			Tuesday, March	16, 2021		
Prepared by: Quality Supervisor				Reviewed by: Manager Quality Assurance			
Prepared by	7: Quality Supervi	sor	Reviewe	ed by: Manager Q	uality Assurar	ice	



## TECHNICAL SHEET GRSPB PDRA MINERAL STONE SILVER 30X61 EXT 1.67

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EVALUATED FEATU	RE	TEST METHOD	NORM ANSI A137.1 REQUIREMENTS (Table 8)	RESULTS		CONCLUSION	
		DI	MENSIONS	•			
				(%)	(mm)		
* Nominal Size, mm				(70)	()		
Nominal length:	610.0 mm						
Manufacturing length:	610.0 mm		± 3.00%	0.00	0.00	Comply	
Nominal width:	300.0 mm	ASTM C499	2010070	0.00	0.00	comply	
Manufacturing width:	303.0 mm		± 3.00%	1.00	3.00	Comply	
0			10.0070	1.00	0.00	Comply	
* Caliber Range							
Manufacturing length:	610.0 mm		0.500/	0.04	4.00	Quanta	
Average length:	611.9 mm	ASTM C499	± 0.50%; ± 2.00mm	0.31	1.90	Comply	
Manufacturing width:	303.0 mm						
Average width:	304.0 mm		± 0.50%; ± 2.00mm	0.33	1.00	Comply	
* Warpage Edge,%							
Length				0.08 0.00	0.48 0.00	Comply	
Width		ASTM C485	± 0.75%; ± 2.00mm	0.00 -0.09	0.00 -0.26	Comply	
* Warpage Diagonal, %		ASTM C485	± 0.50%; ± 2.00mm	0.06 -0.05	0.44 -0.36	Comply	
* Wedging, %		ASTM C502	± 0.50%; ± 2.00mm	0.05 0.00	0.31 0.00	Comply	
* Thickness, mm			,			· · · · · · · · · · · · · · · · · ·	
Manufacturing:	8.5 mm						
Average result:	8.7 mm	ASTM C499	Max. 1.02 mm	2.35	0.20	Comply	
/wordgo rosan	0.1 1111			2.00	0.20	Comply	
		PHYSIC	AL PROPERTIES	-			
* Visible Abrasion Resistance		ASTM C1027	As reported	PE	ELIII	-	
* Water Absorption, %		ASTM C373	Vitreous (P2) 0.5%< wa ≤ 3.0%	1	.90	Comply	
* Crazing Resistance		ASTM C424	Pass	Арр	roved	Comply	
* Breaking Strength, lbf		ASTM C648	Average ≥ 250	3	91	Comply	
			Individual ≥ 225	3	82	Comply	
* Dynamic coefficient of friction - DCC Wet	DF	ANSI A137.1 Section 9.6	≥ 0.42	0	.48	Comply	
		CHEMIC	AL PROPERTIES				
		CIIEMIC	ADTROTERTIES	1		1	
* Chemical Resistance		ASTM C650	As reported	Res	istant	Comply	
* Stain Resistance		ASTM C1378	As reported		istant	Comply	
			·				
	STANDARD SPE	CIFICATIONS FOR	D, ANSI A137.1. R CERAMIC TILE / Table 8: Pres of the typical unavoidable varia		ses		
DATE OF ISSUE				Tuesday, March 16, 2021			
DATE	OF ISSUE			5.			
	Quality Supervis	or	Review	ed by: Manager	Quality Assura	nce	



## TECHNICAL SHEET GRSPB PDRA MINERAL STONE SILVER 61X61 EXT 1.48

EVALUATED FEATURE		TEST METHOD	NORM ANSI A137.1 REQUIREMENTS (Table 8)	RESULTS		CONCLUSION
		D	IMENSIONS			
				(%)	(mm)	
* Nominal Size, mm						
Nominal Size:	610.0 mm					
Manufacturing Size:	610.0 mm	ASTM C499	± 3.00%	0.00	0.00	Comply
* Caliber Range						
Manufacturing Size:	610.0 mm					
Average Size:	609.3 mm	ASTM C499	± 0.50%; ± 2.00mm	-0.11	-0.70	Comply
* Warpage Edge,%		ASTM C485	± 0.75%; ± 2.00mm	0.06 0.00	0.37 0.00	Comply
* Warpage Diagonal, %		ASTM C485	± 0.50%; ± 2.00mm	0.06 0.00	0.48 0.00	Comply
* Wedging, %		ASTM C502	± 0.50%; ± 2.00mm	0.14 0.00	1.20 0.00	Comply
* Thickness, mm						
Manufacturing:	8.5 mm					
Average result:	8.8 mm	ASTM C499	Max. 1.02 mm	3.53	0.30	Comply
		PHYSIC	CAL PROPERTIES	-		-
* Visible Abrasion Resistance		ASTM C1027	As reported	PE		-
* Water Absorption, %		ASTM C373	Vitreous (P2) 0.5%< wa ≤ 3.0%	1.9	90	Comply
* Crazing Resistance		ASTM C424	Pass	Appr	oved	Comply
* Breaking Strength, lbf		ASTM C648	Average ≥ 250	37	75	Comply
			Individual ≥ 225	37	74	Comply
* Dynamic coefficient of friction - DCOF		ANSI A137.1				
Wet		Section 9.6	≥ 0.42	0.53		Comply
		CHEMIC	CAL PROPERTIES			-
* Chemical Resistance		ASTM C650	As reported	Resi	stant	Comply
* Stain Resistance		ASTM C1378	As reported	Resi		Comply
	STANDARD SPI	ECIFICATIONS FC	RD, ANSI A137.1. IR CERAMIC TILE / Table 8: Pres le of the typical unavoidable variat		es	
0				Tuesday, March	16 2021	
	OF ISSUE			Tuesuay, March	10, 2021	
DATE	OF ISSUE Quality Supervi	sor		d by: Manager Q	· · · · · · · · · · · · · · · · · · ·	ice



# TECHNICAL SHEET GRSPB PDRA MINERALSTO WHI 30X61 EXT 1.67

EVALUATED FEATURE       TEST METHOD       NORM ANSI A137.1 REQUIREMENTS (Table 8)         * Nominal Size, mm Nominal length:       610.0 mm       610.0 mm       ASTM C499       ± 3.00%         * Nominal width:       300.0 mm       ASTM C499       ± 3.00%       ± 3.00%         * Caliber Range Manufacturing length:       610.0 mm       ASTM C499       ± 0.50%; ± 2.00mm         Manufacturing width:       303.0 mm       ASTM C499       ± 0.50%; ± 2.00mm         * Caliber Range Manufacturing length:       610.0 mm       ASTM C499       ± 0.50%; ± 2.00mm         Manufacturing length:       608.0 mm       ASTM C499       ± 0.50%; ± 2.00mm         * Warpage Edge,% Length Width       ASTM C485       ± 0.50%; ± 2.00mm       ± 0.50%; ± 2.00mm         * Warpage Diagonal, %       ASTM C485       ± 0.50%; ± 2.00mm       ± 0.50%; ± 2.00mm         * Wedging, %       ASTM C485       ± 0.50%; ± 2.00mm       ± 0.50%; ± 2.00mm         * Warpage Edge,%       ASTM C485       ± 0.50%; ± 2.00mm       ± 0.50%; ± 2.00mm         * Warpage Diagonal, %       ASTM C485       ± 0.50%; ± 2.00mm       ± 0.50%; ± 2.00mm         * Wedging, %       ASTM C485       ± 0.50%; ± 2.00mm       Max. 1.02 mm         * Visible Abrasion Resistance       ASTM C1027       As reported       Vitreous (P2)       <	RESULTS           (%)         (mm)           0.00         0.00           1.00         3.00           -0.33         -2.00           -0.30         -0.90           0.05         -0.01         0.30         -0.01           0.05         -0.01         0.30         -0.01           0.05         -0.01         0.30         -0.01           0.05         -0.01         0.37         -0.03           1.18         0.10         -0.10	7 Comply 4 Comply			
* Nominal Size, mm Nominal length: 610.0 mm Manufacturing length: 610.0 mm Manufacturing width: 303.0 mm * Caliber Range Manufacturing length: 610.0 mm Average length: 608.0 mm Manufacturing width: 303.0 mm Average width: 302.1 mm * Warpage Edge,% Length Width * Warpage Diagonal,% * Warpage Diagonal,% * Warpage Diagonal,% * Warpage result: 8.5 mm Average result: 8.6 mm Average result: 8.6 mm Average result: 8.6 mm Average result: 8.6 mm Average setstance * Visible Abrasion Resistance * Visible Abrasion Resistance * Usible Abrasion Resistance * Dynamic coefficient of friction - DCOF Wet * Dynamic coefficient of friction - DCOF Met * Dynamic coefficient of friction - DCOF * Dynamic coefficient of fr	0.00 0.00 1.00 3.00 -0.33 -2.00 -0.30 -0.90 0.05 -0.01 0.30 -0.00 0.00 -0.06 0.00 -0.11 0.07 -0.05 0.43 -0.3 0.05 -0.01 0.37 -0.03	Comply Comply Comply Comply 6 Comply 7 Comply 4 Comply			
Nominal length:610.0 mm 610.0 mm Manufacturing length:610.0 mm 610.0 mm 300.0 mm Manufacturing width:ASTM C499 ± 3.00%± 3.00%* Caliber Range Manufacturing length:610.0 mm 608.0 mm Average length:ASTM C499± 0.50%; ± 2.00mmManufacturing width:303.0 mm 302.1 mmASTM C499± 0.50%; ± 2.00mm* Warpage Edge,% Length WidthKASTM C485± 0.50%; ± 2.00mm* Warpage Edge,% Length WidthASTM C485± 0.50%; ± 2.00mm* Warpage Edge,% Length WetASTM C485± 0.50%; ± 2.00mm* Warpage Edge,% Length WetASTM C485± 0.50%; ± 2.00mm* Visible Abrasion Resistance * Visible Abrasion ResistanceASTM C499Max. 1.02 mm* Visible Abrasion Resistance * Breaking Strength, lbfASTM C424 ASTM C484Pass* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6≥ 0.42* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6≥ 0.42	0.00         0.00           1.00         3.00           -0.33         -2.00           -0.30         -0.90           0.05         -0.01         0.30         -0.00           0.00         -0.06         0.00         -0.11           0.07         -0.05         0.43         -0.31           0.05         -0.01         0.37         -0.03	Comply Comply Comply Comply 6 Comply 7 Comply 4 Comply			
Nominal length:610.0 mm 610.0 mm Manufacturing length:610.0 mm 610.0 mm 300.0 mm Manufacturing width:ASTM C499 ± 3.00%* Caliber Range Manufacturing length:610.0 mm 608.0 mm Average length:ASTM C499 ± 0.50%; ± 2.00mmManufacturing width:303.0 mm 303.0 mm Average width:ASTM C499 ± 0.50%; ± 2.00mm* Warpage Edge,% Length WidthKASTM C499* Warpage Edge,% Length WidthKASTM C485 ± 0.50%; ± 2.00mm* Warpage Edge,% Length WidthASTM C485 ± 0.50%; ± 2.00mm* Warpage Edge,% Length WetASTM C485 ± 0.50%; ± 2.00mm* Warpage Edge,% Length WetASTM C485 ± 0.50%; ± 2.00mm* Visible Abrasion Resistance * Visible Abrasion ResistanceASTM C1027 ASTM C494 ASTM C373 O.5%< wa s 3.0%* Crazing Resistance * Breaking Strength, lbfASTM C484 Average 2250 Individual 225* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6 ≥ 0.42* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6 ≥ 0.42	1.00         3.00           -0.33         -2.00           -0.30         -0.90           0.05         -0.01         0.30         -0.00           0.00         -0.06         0.00         -0.11           0.07         -0.05         0.43         -0.30           0.05         -0.01         0.37         -0.05	Comply Comply Comply Comply 6 Comply 7 Comply 4 Comply			
Manufacturing length:610.0 mm 300.0 mm Manufacturing width:ASTM C499± 3.00%* Caliber Range Manufacturing length:610.0 mm 608.0 mm Average length:ASTM C499± 3.00%* Manufacturing width:303.0 mm Average width:ASTM C499± 0.50%; ± 2.00mm* Warpage Edge,% Length Width302.1 mmASTM C485± 0.50%; ± 2.00mm* Warpage Edge,% Length WidthASTM C485± 0.75%; ± 2.00mm* Warpage Diagonal, %ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C485± 0.50%; ± 2.00mm* Water Absorption, %8.5 mm 8.6 mmASTM C499* Visible Abrasion ResistanceASTM C1027As reported* Water Absorption, %ASTM C1027As reported* Visible Abrasion ResistanceASTM C493Average 2250 Individual ≥ 225* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6≥ 0.42	1.00         3.00           -0.33         -2.00           -0.30         -0.90           0.05         -0.01         0.30         -0.00           0.00         -0.06         0.00         -0.11           0.07         -0.05         0.43         -0.30           0.05         -0.01         0.37         -0.05	Comply Comply Comply Comply 6 Comply 7 Comply 4 Comply			
Nominal width:300.0 mm 303.0 mmASTM C499Manufacturing width:303.0 mm 4 standard± 3.00%* Caliber Range Manufacturing length:610.0 mm 608.0 mm Average length:ASTM C499Manufacturing width:303.0 mm 302.1 mmASTM C499* Warpage Edge,% Length WidthASTM C485± 0.50%; ± 2.00mm* Warpage Edge,% Length WidthASTM C485± 0.75%; ± 2.00mm* Warpage Diagonal,%ASTM C485± 0.50%; ± 2.00mm* Wedging,%ASTM C485± 0.50%; ± 2.00mm* Wedging,%ASTM C485± 0.50%; ± 2.00mm* Warpage Diagonal,%ASTM C485± 0.50%; ± 2.00mm* Watgrage Diagonal,%ASTM C485± 0.50%; ± 2.00mm* Watgrage result:8.5 mm AsTM C502± 0.50%; ± 2.00mm* Visible Abrasion ResistanceASTM C499Max. 1.02 mm* Visible Abrasion ResistanceASTM C1027 As reportedAs reported* Visible Abrasion ResistanceASTM C1027 As reportedAs reported* Visible Abrasion ResistanceASTM C1027 As reportedAs reported* Usible Abrasion ResistanceASTM C424 ASTM C373Pass* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6≥ 0.42* Dynamic coefficient of friction - DCOF WetANSI A137.1 	1.00         3.00           -0.33         -2.00           -0.30         -0.90           0.05         -0.01         0.30         -0.00           0.00         -0.06         0.00         -0.11           0.07         -0.05         0.43         -0.30           0.05         -0.01         0.37         -0.05	Comply Comply Comply Comply 6 Comply 7 Comply 4 Comply			
Nominal width:300.0 mm 303.0 mm± 3.00%* Caliber Range Manufacturing length:610.0 mm 608.0 mm Average length:610.0 mm 608.0 mm Average width:4STM C499* Warpage Edge,% Length Width* 0.50%; ± 2.00mm± 0.50%; ± 2.00mm* Warpage Edge,% Length Width* ASTM C485± 0.75%; ± 2.00mm* Warpage Diagonal, %* ASTM C485± 0.50%; ± 2.00mm* Wedging, %* ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C485± 0.50%; ± 2.00mm* Visible Abrasion Resistance8.5 mm Aserage result:ASTM C499* Visible Abrasion ResistanceASTM C1027As reported* Visible Abrasion ResistanceASTM C373Vitreous (P2) 0.5%< wa ≤ 3.0%	-0.33 -2.00 -0.30 -0.90 0.05 -0.01 0.30 -0.0 0.00 -0.06 0.00 -0.1 0.07 -0.05 0.43 -0.3 0.05 -0.01 0.37 -0.0	Comply Comply 6 Comply 7 Comply 4 Comply			
* Caliber Range Manufacturing length: 610.0 mm Average length: 608.0 mm Manufacturing width: 303.0 mm Average width: 302.1 mm * Warpage Edge,% Length Width * Warpage Diagonal,% * Warpage Diagonal,% * Warpage Diagonal,% * Warpage result: 8.5 mm Manufacturing: 8.5 mm Average result: 8.6 mm ASTM C485 * Visible Abrasion Resistance * Usible Abrasion Resistance * Visible Abrasion Resistance * Usible Abrasion Resistance * Visible Abrasion Resistance * Visible Abrasion Resistance * Usible Abrasion Resistance * Visible Abrasion Resistance * Usible Abrasion Resistance * Difference Ab	-0.33 -2.00 -0.30 -0.90 0.05 -0.01 0.30 -0.0 0.00 -0.06 0.00 -0.1 0.07 -0.05 0.43 -0.3 0.05 -0.01 0.37 -0.0	Comply Comply 6 Comply 7 Comply 4 Comply			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-0.30         -0.90           0.05         -0.01         0.30         -0.01           0.00         -0.06         0.00         -0.11           0.07         -0.05         0.43         -0.33           0.05         -0.01         0.37         -0.05	6 Comply 7 Comply 4 Comply			
Average length:608.0 mm 303.0 mm 302.1 mmASTM C499± 0.50%; ± 2.00mm* Warpage width:302.1 mm± 0.50%; ± 2.00mm± 0.50%; ± 2.00mm* Warpage Edge,% Length WidthASTM C485± 0.75%; ± 2.00mm* Warpage Diagonal, %ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C485± 0.50%; ± 2.00mm* Thickness, mm Manufacturing:8.5 mm 8.6 mmASTM C499Average result:8.6 mmASTM C499* Visible Abrasion ResistanceASTM C1027* Water Absorption, %ASTM C1027* Visible Abrasion ResistanceASTM C424 Pass* Visible Abrasion ResistanceASTM C424 ASTM C373* Usible Abrasion ResistanceASTM C424 Pass* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6* Dynamic coefficient of friction - DCOFANSI A137.1 Section 9.6* Dynamic coefficient of friction - DCOFANSI A137.1 Section 9.6	-0.30         -0.90           0.05         -0.01         0.30         -0.01           0.00         -0.06         0.00         -0.11           0.07         -0.05         0.43         -0.33           0.05         -0.01         0.37         -0.05	6 Comply 7 Comply 4 Comply			
Average length:608.0 mm 303.0 mm 302.1 mmASTM C499± 0.50%; ± 2.00mm* Warpage width:302.1 mm± 0.50%; ± 2.00mm± 0.50%; ± 2.00mm* Warpage Edge,% Length WidthASTM C485± 0.75%; ± 2.00mm* Warpage Diagonal, %ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C485± 0.50%; ± 2.00mm* Thickness, mm Manufacturing:8.5 mm 8.6 mmASTM C499Average result:8.6 mmASTM C499* Visible Abrasion ResistanceASTM C1027* Water Absorption, %ASTM C1027* Visible Abrasion ResistanceASTM C424 Pass* Visible Abrasion ResistanceASTM C424 ASTM C373* Usible Abrasion ResistanceASTM C424 Pass* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6* Dynamic coefficient of friction - DCOFANSI A137.1 Section 9.6* Dynamic coefficient of friction - DCOFANSI A137.1 Section 9.6	-0.30         -0.90           0.05         -0.01         0.30         -0.01           0.00         -0.06         0.00         -0.11           0.07         -0.05         0.43         -0.33           0.05         -0.01         0.37         -0.05	6 Comply 7 Comply 4 Comply			
Manufacturing width:303.0 mm 302.1 mm± 0.50%; ± 2.00mm* Warpage Edge,% Length WidthASTM C485± 0.75%; ± 2.00mm* Warpage Diagonal, %ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C485± 0.50%; ± 2.00mm* Thickness, mm Manufacturing:8.5 mm 8.6 mmASTM C499Average result:8.6 mmASTM C499* Visible Abrasion ResistanceASTM C1027 0.5%< wa ≤ 3.0%	0.05 -0.01 0.30 -0.0 0.00 -0.06 0.00 -0.1 0.07 -0.05 0.43 -0.3 0.05 -0.01 0.37 -0.0	6 Comply 7 Comply 14 Comply			
* Warpage Edge,% Length Width * Warpage Diagonal,% * Wedging,% * Thickness, mm Manufacturing: 8.5 mm Average result: 8.6 mm ASTM C429 Max. 1.02 mm PHYSICAL PROPERTIES * Visible Abrasion Resistance * Water Absorption,% * Crazing Resistance * Water Absorption,% * Crazing Resistance * Breaking Strength, lbf * Dynamic coefficient of friction - DCOF Wet ASTM C424 ASTM C424 ASTM C424 ASTM C424 ASTM C424 Pass ASTM C428 ASTM C424 Pass ASTM C428 ASTM C424 Pass ASTM C428 AVerage ≥ 250 Individual ≥ 225 * Dynamic coefficient of friction - DCOF Wet CHEMICAL PROPERTIES	0.05 -0.01 0.30 -0.0 0.00 -0.06 0.00 -0.1 0.07 -0.05 0.43 -0.3 0.05 -0.01 0.37 -0.0	6 Comply 7 Comply 14 Comply			
Length WidthASTM C485± 0.75%; ± 2.00mm* Watpage Diagonal, %ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C502± 0.50%; ± 2.00mm* Thickness, mm Manufacturing:8.5 mmASTM C499Average result:8.6 mmASTM C499Max. 1.02 mmMax. 1.02 mm* Visible Abrasion ResistanceASTM C1027* Water Absorption, %ASTM C373* Crazing ResistanceASTM C373* Crazing ResistanceASTM C424* Breaking Strength, lbfASTM C648* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6* Dynamic coefficient of friction - DCOFANSI A137.1 Section 9.6* Usible Abrasion ResistanceANSI A137.1 Section 9.6	0.00 -0.06 0.00 -0.1 0.07 -0.05 0.43 -0.3 0.05 -0.01 0.37 -0.0	7 Comply 4 Comply			
Length WidthASTM C485± 0.75%; ± 2.00mm* Watpage Diagonal, %ASTM C485± 0.50%; ± 2.00mm* Wedging, %ASTM C502± 0.50%; ± 2.00mm* Thickness, mm Manufacturing:8.5 mmASTM C499Average result:8.6 mmASTM C499Max. 1.02 mmMax. 1.02 mm* Visible Abrasion ResistanceASTM C1027* Water Absorption, %ASTM C373* Crazing ResistanceASTM C373* Crazing ResistanceASTM C424* Breaking Strength, lbfASTM C648* Dynamic coefficient of friction - DCOF WetANSI A137.1 Section 9.6* Dynamic coefficient of friction - DCOFANSI A137.1 Section 9.6	0.00 -0.06 0.00 -0.1 0.07 -0.05 0.43 -0.3 0.05 -0.01 0.37 -0.0	7 Comply 4 Comply			
Width     ASTM C485     ± 0.75%; ± 2.00mm       * Warpage Diagonal, %     ASTM C485     ± 0.50%; ± 2.00mm       * Wedging, %     ASTM C502     ± 0.50%; ± 2.00mm       * Thickness, mm     ASTM C502     ± 0.50%; ± 2.00mm       Manufacturing:     8.5 mm     ASTM C499     Max. 1.02 mm       Average result:     8.6 mm     ASTM C499     Max. 1.02 mm       * Visible Abrasion Resistance     ASTM C1027     As reported       * Water Absorption, %     ASTM C373     Vitreous (P2)       * Crazing Resistance     ASTM C424     Pass       * Breaking Strength, lbf     ASTM C648     Average ≥ 250       * Dynamic coefficient of friction - DCOF     ANSI A137.1     ≥ 0.42       Vet     External ASTM C499     ≥ 0.42	0.00 -0.06 0.00 -0.1 0.07 -0.05 0.43 -0.3 0.05 -0.01 0.37 -0.0	7 Comply 4 Comply			
* Warpage Diagonal, % * Wedging, % * Thickness, mm Manufacturing: 8.5 mm Average result: 8.6 mm Average result: 8.6 mm Average result: 8.6 mm ASTM C499 Max. 1.02 mm Max. 1.02	0.07 -0.05 0.43 -0.3 0.05 -0.01 0.37 -0.0	4 Comply			
* Wedging, % * Thickness, mm Manufacturing: 8.5 mm Average result: 8.6 mm Average result: 8.6 mm ASTM C499 Max. 1.02 mm Max. 1.02 mm	0.05 -0.01 0.37 -0.03				
* Thickness, mm       8.5 mm       ASTM C499       Max. 1.02 mm         Average result:       8.6 mm       ASTM C499       Max. 1.02 mm         * Visible Abrasion Resistance       ASTM C1027       As reported         * Water Absorption, %       ASTM C373       Vitreous (P2) 0.5%< wa ≤ 3.0%		5 Comply			
Manufacturing:       8.5 mm       ASTM C499       Max. 1.02 mm         Average result:       8.6 mm       ASTM C499       Max. 1.02 mm         * Visible Abrasion Resistance       ASTM C1027       As reported         * Water Absorption, %       ASTM C373       Vitreous (P2) 0.5%< wa ≤ 3.0%	1.18 0.10				
Average result:     8.6 mm     ASTM C499     Max. 1.02 mm       * Visible Abrasion Resistance     ASTM C1027     As reported       * Water Absorption, %     ASTM C373     Vitreous (P2) 0.5%< wa ≤ 3.0%	1.18 0.10				
PHYSICAL PROPERTIES         * Visible Abrasion Resistance       ASTM C1027         * Water Absorption, %       ASTM C373         * Crazing Resistance       ASTM C373         * Crazing Resistance       ASTM C424         * Breaking Strength, lbf       ASTM C648         * Dynamic coefficient of friction - DCOF       ANSI A137.1         Wet       ≥ 0.42	1.18 0.10				
* Visible Abrasion Resistance       ASTM C1027       As reported         * Water Absorption, %       ASTM C373       Vitreous (P2)         * Crazing Resistance       ASTM C424       Pass         * Breaking Strength, lbf       ASTM C648       Average ≥ 250         * Dynamic coefficient of friction - DCOF       ANSI A137.1       ≥ 0.42         Wet       Exection 9.6       ≥ 0.42	1	Comply			
* Water Absorption, % * Crazing Resistance * Breaking Strength, lbf Dynamic coefficient of friction - DCOF Wet Wet Wet Wet Wet Wet Wet Wet		-			
<ul> <li>* Water Absorption, %</li> <li>* Crazing Resistance</li> <li>* Crazing Resistance</li> <li>* Breaking Strength, lbf</li> <li>* Dynamic coefficient of friction - DCOF</li> <li>Wet</li> </ul> ANSI A137.1 Wet EVENTIAL STATE CHEMICAL PROPERTIES	PEI III	-			
* Water Absorption, %     ASTM C373     0.5%< wa ≤ 3.0%					
* Breaking Strength, lbf * Dynamic coefficient of friction - DCOF Wet ASTM C648 Average ≥ 250 Individual ≥ 225 ANSI A137.1 Section 9.6 ≥ 0.42 CHEMICAL PROPERTIES	2.90	Comply			
* Breaking Strength, lbf * Dynamic coefficient of friction - DCOF Wet ASTM C648 Average ≥ 250 Individual ≥ 225 ANSI A137.1 Section 9.6 ≥ 0.42 CHEMICAL PROPERTIES	Approved	Comply			
* Dynamic coefficient of friction - DCOF Wet 225 ANSI A137.1 Section 9.6 ≥ 0.42 CHEMICAL PROPERTIES	387	Comply			
Wet     Section 9.6     ≥ 0.42       CHEMICAL PROPERTIES	373	Comply			
Wet     Section 9.6     ≥ 0.42       CHEMICAL PROPERTIES					
CHEMICAL PROPERTIES	0.50	Comply			
* Chemical Resistance ASTM C650 As reported	1				
	Resistant	Comply			
* Stain Resistance ASTM C1378 As reported	Resistant	Comply			
Requirements verified as indicated in AMERICAN STANDARD, ANSI A137.1. AMERICAN NATIONAL STANDARD SPECIFICATIONS FOR CERAMIC TILE / Table 8: Pres The weight, the tone and the dimensions are subject to some of the typical unavoidable varia of ceramic cooking.		1			
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César Prado R.	Tuesday, July 20, 2021	urance			



## TECHNICAL SHEET GRSPB PDRA MINERALSTO WHI 61X61 EXT 1.48

Quality assur							
EVALUATED FEATURE		TEST METHOD	NORM ANSI A137.1 REQUIREMENTS (Table 8)	RESULTS		CONCLUSIO	
		DI	MENSIONS				
				(%)	(mm)		
* Nominal Size, mm							
Nominal Size:	610.0 mm						
Manufacturing Size:	610.0 mm	ASTM C499	± 3.00%	0.00	0.00	Comply	
* Caliber Range							
Manufacturing Size:	610.0 mm	107110400					
Average Size:	611.0 mm	ASTM C499	± 0.50%; ± 2.00mm	0.16	1.00	Comply	
* Warpage Edge,%		ASTM C485	± 0.75%; ± 2.00mm	0.11 0.00	0.70 0.00	Comply	
* Warpage Diagonal, %		ASTM C485	± 0.50%; ± 2.00mm	0.13 0.00	1.10 0.00	Comply	
* Wedging, %		ASTM C502	± 0.50%; ± 2.00mm	0.09 0.00	0.75 0.00	Comply	
* Thickness, mm							
Manufacturing:	8.5 mm						
Average result:	8.8 mm	ASTM C499	Max. 1.02 mm	3.53	0.30	Comply	
		PHYSIC	AL PROPERTIES			-	
* Visible Abrasion Resistance		ASTM C1027	As reported	PE	1 111	-	
* Water Absorption, %		ASTM C373	Vitreous (P2) 0.5%< wa ≤ 3.0%	1.3	30	Comply	
* Crazing Resistance		ASTM C424	Pass	Appr	oved	Comply	
* Breaking Strength, lbf		ASTM C648	Average ≥ 250	34	15	Comply	
			Individual ≥ 225	33	36	Comply	
* Dynamic coefficient of friction - DCOF		ANSI A137.1					
Wet		Section 9.6	≥ 0.42	0.45		Comply	
		CHEMIC	AL PROPERTIES			T	
* Chemical Resistance		ASTM C650	As reported	Resi	stant	Comply	
* Stain Resistance		ASTM C1378	As reported	Resi	stant	Comply	
AMERICAN NATION		ECIFICATIONS FOR	D, ANSI A137.1. R CERAMIC TILE / Table 8: Pres of the typical unavoidable varia		es	•	
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Prepared by: Quality Supervisor				Reviewed by: Manager Quality Assurance			
Prepared by	y: Quality Supervi	sor	Reviewe	ed by: Manager Q	uality Assurar	ice	