



REGAL

CREATION OF NIRO GRANITE





## REGAL

A NEW GENERATION OF REVOLUTIONARY VITRIFIED PORCELAIN TILES PRODUCED USING A SPECIAL TECHNIQUE HAS RESULTED TO THE BIRTH OF THE REGAL SERIES. IT IS A NEW COLLECTION OF PREMIUM TILES WITH RANDOM EFFECTS PRODUCED ON POLISHED, MATT AND ROCK SURFACE. THIS NEW TECHNOLOGY AND AESTHETIC TASTE ARE WISELY COMBINED TO CREATE LIVING SPACE HARMONY WITH A LEADING-EDGE ARCHITECTURE AND INNOVATIVE INTERIOR DESIGN.

BLenheim PALACE IS A LARGE AND MONUMENTAL COUNTRY HOUSE SITUATED IN WOODSTOCK, OXFORDSHIRE, ENGLAND. IT IS THE ONLY NON-EPISCOPAL COUNTRY HOUSE IN ENGLAND TO HOLD THE TITLE "PALACE", WAS BUILT BETWEEN 1705 AND CIRCA 1724.



BEST USE OF TILE IN A HOUSING DEVELOPMENT IN CENTRO, NORTHAMPTON BY KINGSOAK - 2007  
BEST USE FOR EXTERIOR TILE BY AUSTRALIAN TILE COUNCIL, QUEENSLAND - 2008

\* 80x80

\* 40x80

\* ONLY IN MATT AND POLISHED SURFACE

60x60

30x60

30x30

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REGAL

GMR81 LIGHT GREY



POLISHED SURFACE



MATT SURFACE



STRUCTURED SURFACE



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REGAL

GMR82 GREY



POLISHED SURFACE



MATT SURFACE



STRUCTURED SURFACE



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GMR83 VANILLA



POLISHED SURFACE



MATT SURFACE



STRUCTURED SURFACE



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REGAL

GMR85 NOCE



POLISHED SURFACE



MATT SURFACE



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GMR88 SAND



POLISHED SURFACE



MATT SURFACE



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REGAL

GMR90 ALMOND



POLISHED SURFACE



MATT SURFACE



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REGAL

GMR94 OLIVE



POLISHED SURFACE



MATT SURFACE



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REGAL

GMR97 BLACK



POLISHED SURFACE



MATT SURFACE



BLHENHEIM PALACE IS A LARGE AND MONUMENTAL COUNTRY HOUSE SITUATED IN WOODSTOCK, OXFORDSHIRE, ENGLAND. IT IS THE ONLY NON-EPISCOPAL COUNTRY HOUSE IN ENGLAND TO HOLD THE TITLE 'PALACE', WAS BUILT BETWEEN 1705 AND CIRCA 1724.



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REGAL

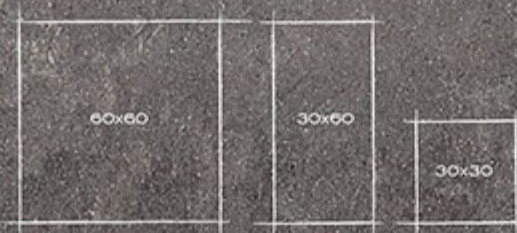
GMR98 ANTRACITE



POLISHED SURFACE



MATT SURFACE



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SERIES	SURFACES	30x30	30x60	60x60	40x80	80x80
GMR81 LIGHT GREY	POLISHED SURFACE	*	*	*	*	*
	MATT SURFACE	*	*	*	*	*
	STRUCTURED SURFACE	*	*	*		
GMR82 GREY	POLISHED SURFACE	*	*	*		
	MATT SURFACE	*	*	*		
	STRUCTURED SURFACE	*	*	*		
GMR83 VANILLA	POLISHED SURFACE	*	*	*	*	*
	MATT SURFACE	*	*	*	*	*
	STRUCTURED SURFACE	*	*	*		
GMR85 NOCE	POLISHED SURFACE	*	*	*		
	MATT SURFACE	*	*	*		
GMR88 SAND	POLISHED SURFACE	*	*	*		
	MATT SURFACE	*	*	*		
GMR90 ALMOND	POLISHED SURFACE	*	*	*		
	MATT SURFACE	*	*	*		
GMR94 OLIVE	POLISHED SURFACE	*	*	*		
	MATT SURFACE	*	*	*		
GMR97 BLACK	POLISHED SURFACE	*	*	*	*	*
	MATT SURFACE	*	*	*	*	*
GMR98 ANTRACITE	POLISHED SURFACE	*	*	*		
	MATT SURFACE	*	*	*		

# TECHNICAL SPECIFICATIONS

Description	Standard Test	Measurement Unit	ISO Standard Requirement	NIRO GRANITE
Length & Width	MS ISO 10545 - 2	mm	± 0.5% Max	± 0.25% Max
Thickness	MS ISO 10545 - 2	mm	± 5.0% Max	± 2.50% Max
Sides Straightness	MS ISO 10545 - 2	mm	± 0.5% Max	± 0.25% Max
Rectangularity	MS ISO 10545 - 2	mm	± 0.6% Max	± 0.30% Max
Flatness: a) Centre Curvature b) Edge Curvature c) Warpage	MS ISO 10545 - 2 MS ISO 10545 - 2 MS ISO 10545 - 2	mm mm mm	± 0.5% Max ± 0.5% Max ± 0.5% Max	± 0.25% Max ± 0.25% Max ± 0.25% Max
Surface Quality	MS ISO 10545 - 2	One major area of tiles	≥ 95% free from visible defect	Comply
Water Absorption	MS ISO 10545 - 3	Mass	≤ 0.5%	≤ 0.25% Max
Modulus of Rupture	MS ISO 10545 - 4	N/mm2	≥ 35 N/mm2	≥35 N/mm2
Deep Abrasion	MS ISO 10545 - 6	mm3	≤ 175 mm3	≤ 160 mm3
Surface Abrasion PEI ASTM C1027	MS ISO 10545 - 7	Visual Check	Manuf. to State Abrasion Class, Cycle Passed	Min PEI 3
Crazing Test	MS ISO 10545 - 11	Visual Check	Not Applicable for porcelain tiles	Not Applicable
Frost Resistance	MS ISO 10545 - 12	Visual Check	Required	No Visible Crack
Chemical Resistance (Low Cons.)	MS ISO 10545 - 13	Visual Check	Manuf. to State	Max Visible Change On Cut Side
Chemical Resistance (Household/Swimming Pool)	MS ISO 10545 - 13	Visual Check	Max Visible Change On Cut Side	Max Visible Change On Cut Side
Stain Resistance	MS ISO 10545 - 14	Visual Check	Class 3 Min	Class 3 Min
Coefficient of Friction AS/NZS 4586-1999 App.D.	MS ISO 10545 - 17	Manuf. to State	Manuf. to State	Oil /Wet Ramp (R9 Min)

Each different tiles series are produced to meet different performance requirements. For specific product technical performance, please request from Niro Granite sales team or their agent or distributor.

Colour Variations: Since the colour reproduction in this printed piece will vary from the actual tile colours, final selection should be made from tile samples. Colour, shade and glaze variations may exist due to the inherent characteristics of porcelain tile.

Due to the low porosity of porcelain tiles, an Improved High Performance Cementitious adhesive in accordance to BS EN 12004 & ISO 13007-1 is highly recommended for proper installation. Products that meet this standard are available amongst leading adhesive manufacturers. Please seek expert advice from adhesive manufacturers for proper selection and application.



## SHADE AND TONALITIES

<b>U1</b> <b>UNIFORM</b> FROM TILE TO TILE	<b>U2</b> <b>SLIGHTLY NOTICEABLE</b> FROM TILE TO TILE	<b>U3</b> <b>MODERATELY NOTICEABLE</b> FROM TILE TO TILE	<b>U4</b> <b>DISTINCTLY NOTICEABLE</b> FROM TILE TO TILE
<b>U1</b> Uniform from tile to tile The range of colours and tones within the same shade is relatively uniform from tile to tile. Minimal to no difference among pieces from the same production run.	<b>U2</b> Slightly noticeable from tile to tile The range of colours and tones within the same shade is slightly noticeable from tile to tile. Clearly distinguishable differences in design or pattern with similar or slight change in colour tones.	<b>U3</b> Moderately noticeable from tile to tile The range of colours and tones within the same shade is moderately noticeable from tile to tile. Clearly distinguishable differences in design or pattern.	<b>U4</b> Distinctly noticeable from tile to tile The range of colours and tones within the same shade is distinctly different from tile to tile. Random colour differences from tile to tile, so that one tile may have totally different colors from that on other tiles. Final installation can be unique.





[www.nirogranite.com.my](http://www.nirogranite.com.my)