



European
Ceramics

MAKRANA RANGE

Product Name: **MAKRANA - VARIOUS COLOURS/FINISHES**

Product Identifier: Refer to tile name and product code on paperwork/packaging

Product Description: A glazed porcelain tile and a water absorption rate of less than 0.50%.

Country Of Origin: Italy

Building Code Obligations

Code Clauses:

B2 – Durability

B2.3.1

C3 – Fire affecting areas beyond the
source

D1 – Access routes

D1.3.3

E3 – Internal moisture

E3.3.2, 3.3.3, 3.3.4

G3 – Food preparation and prevention of
contamination

G3.3.2

G6 – Airborne and Impact sound

G6.3.1



Note – this building product is not subject to a warning/ban under section 26 of the Building Act 2004

Manufacturer Details:

European Ceramics Approved

BPIR COMPLIANT

Importer Details:

European Ceramic Tiles Ltd

Address: 7A Cowley Place, Rosedale, AKL 0632

NZBN: 9429037294571

Website: euroceramics.co.nz

Scope	Use
B2 Durability	See below suitability table
C3 Fire	The Building Code relating to fire ratings regulation & standards become mandatory from April 2013, establishing the list of products belonging to Classes A 'No Contribution to Fire' provided for in Decision 94/611/EC implementing Article 20 of Council Directive 89/106/EEC.
D1 Access Routes	Refer to slip resistance documentation for all Access routes classifications D1/AS1 for above range.
E3 Internal Moisture	Under E3 Tiles installed over a waterproof membrane using a nonporous grouting system, are an acceptable solution.
G3 Food Preparation & Prevention from Contamination	As an impervious and easy to clean surface, this range complies.
G6 Airborne & Impact Sound	If required, tiles can form part of an acoustic system to comply with IIC & STC in conjunction with an approved third-party system.

<i>Suitability *</i>	<i>Residential</i>	<i>Light Commercial</i>	<i>Commercial</i>
Indoor Floor	*	*	*
Indoor Walls	*	*	*
Outdoor Cladding	*	*	*
Frost Resistant	*	*	*
Swimming Pool Submerged	*	*	*
Swimming Pool Surround	*	*	*
Paving/External	*	*	*
Over Underfloor Heating	*	*	*
Kitchen wall	*	*	*
Within 1.5m of a Plumbing Fixture or Fitting	*	*	*

Manufacturer Details:
European Ceramics Approved
BPIR COMPLIANT

Importer Details:
European Ceramic Tiles Ltd
Address: 7A Cowley Place, Rosedale, AKL 0632
NZBN: 9429037294571
Website: euroceramics.co.nz

Building Code References

B2 – Durability

Compliance with B2 Durability is about providing evidence that the product will meet the relevant durability life in the context of the environment in which it will be located.

The building code sets out the framework for establishing the relevant durability life of building elements based on a number of criteria. B2/AS1 provides a decision tree to establish the relevant durability for common building materials in different circumstances.

Having determined the durability life of the product, the next step is to determine if the product, when exposed to the environment, will continue to perform for the relevant period. A key tool which a product supplier can consider in claiming compliance is limiting the environment in which the product will be exposed to (e.g. a ferrous material used in an indoor environment will last longer than it would when exposed to salt spray — in this example it would be appropriate for the supplier to condition the compliance information to use only in indoor environments).

C3 – Fire affecting areas beyond the source

C3 Fire affecting areas beyond the fire source is primarily about ensuring that fire does not spread from a fire in the building (in both vertically and horizontally) and from an adjacent building.

The prime product attribute used is the fire resistance rating (FRR) methodology. In most cases a product is combined with other products to achieve a FRR (e.g. an external wall fire rating may be formed by the combination of the external cladding, thermal insulation and the internal lining).

C/AS1 and C/AS2 set out performance criteria for buildings and in particular the FRR requirements for various types of buildings and parts of buildings. Appendix C of C/AS2 sets out test methods for the building elements involved in spread of fire. Appendix B of C/AS2 sets out performance criteria for sprinkler systems while Appendix A sets out criteria for fire safety systems such as alarms and hydrants.

D1 – Access routes

For D1 access routes, in most cases product-related compliance for access routes is slip resistance for floors and the shapes/locations etc of handrails. The Acceptable Solution for access D1/AS1 and NZS 4121:2001 provide good information on compliance for products on access routes.

E3 – Internal Moisture

E3 Internal Moisture is about ensuring that moisture created within the building does not lead to mould or create damage to adjacent buildings or structural elements in the building in which it is installed.

Prevention of the creation of mould is a combination of temperature, insulation and ventilation. Prevention of water damaging other building elements is mainly about installation details (i.e. sealing joints) as well as impervious products. E3/AS1 provides some useful design details, albeit without much product material information.

Manufacturer Details:
European Ceramics Approved
BPIR COMPLIANT

Importer Details:
European Ceramic Tiles Ltd
Address: 7A Cowley Place, Rosedale, AKL 0632
NZBN: 9429037294571
Website: euroceramics.co.nz

G3 – Food preparation and prevention of contamination

G3 Food preparation and prevention from contamination for a product (such as a kitchen bench) is mainly associated with being easily cleaned and impervious. G3/AS1 provides some general design details for food preparation areas but has no referenced product standards, although the document does state some acceptable materials used for surfaces. Compliance with G3/AS1 is not mandatory but provides a good benchmark for compliance.

G6 – Airborne and Impact Sound

For a product, G6 Airborne and impact sound is generally about systems which are designed to work together to achieve the necessary sound attenuation.

The code itself at G6.3.2 sets a quantifiable performance level: “The Sound Transmission Class of walls, floors and ceilings, shall be no less than 55” and G6.3.2 sets the impact insulation class of floors shall be no less than 55. The Acceptable Solution G6/AS1 sets out the transmission and impact insulation class of common wall systems. G6/VM1 sets out test methodologies where the details do not match those of G6/AS1.

Manufacturer Details:
European Ceramics Approved
BPIR COMPLIANT

Importer Details:
European Ceramic Tiles Ltd
Address: 7A Cowley Place, Rosedale, AKL 0632
NZBN: 9429037294571
Website: euroceramics.co.nz

Technical Information







Technical specifications of porcelain

Conforming to european standards en 14411 appendice g gruppo Bla con e ≤ 0,5 %

Caratteristiche tecniche Gres porcellanato - conformi a norme europee en 14411 appendice G gruppo Bla con e ≤ 0,5 %

Caractéristiques techniques du grès cérame - conformes aux normes européennes EN 14411 appendice G groupe Bla con e ≤ 0,5 %

Technische eigenschaften für feinsteinzeug - gemäß den europäischen normen EN 14411 appendice G gruppo Bla con e ≤ 0,5 %

PHYSICAL PROPERTIES CARATTERISTICA TECNICA CARACTERISTIQUE TECHNIQUE TECHNISCHEDATEN	TESTING METHOD METODO DI PROVA NORME D'ESSAIS PRÜFVERFAHREN	REFERENCE STANDARD REFERIMENTO NORMA REFERENCE NORME STANDARDEWERT	PRODUCT VALUES VALORE PRODOTTO VALEUR PRODUIT PRODUKT WERTE	
 Size Dimensioni Dimensions Abmessungen	EN ISO 10545-2	Length and width / Lunghezza e larghezza Longueur et largeur / Länge und Breite	7 cm ≤ N < 15 cm (mm)	N ≥ 15 cm (%) (mm)
			±0,9	±0,8 ±2,0
		Thickness / Spessore / Epaisseur / Stärke	±0,5	±5,0 ±0,5
		Linearity / Rettilineità spigoli Rectitude des arêtes / Kantenegeradheit	±0,75	±0,5 ±1,5
		Wedging / Ortogonalità / Orthogonalité / Rechtwinkligkeit	±0,75	±0,5 ±2,0
		Warpage / Planarità / Planéité / Ebenförmigkeit	±0,75	±0,5 ±2,0
 Water absorption % Assorbimento d'acqua % Absorption d'eau % Wasseraufnahme %	EN ISO 10545-3	E ≤ 0,5% (individual value Max. 0,6%)		Conforming Conforme Erfüllt
		medium value ≥ 35 N/mm² (individual value Min. 32 N/mm²)		Conforming Conforme Erfüllt
		sp. ≤ 7,5 mm: min 7000 N sp. ≥ 7,5 mm: min 1300 N		Conforming Conforme Erfüllt
		175 mm/3 max.		Average / Medio Moyenne / Mittelwert ≤ 175 mm/3
		Required Richiesta Requis Gefordert		II - V
 Abrasion resistance Resistenza all'abrasione Résistance à l'abrasion Widerstand gegen Verschleiss	EN ISO 10545-7	Declared value Valore dichiarato Valeur déclarée Angabener Wert		6,5x10 ⁻⁶ °C
		Pass according to iso 10545-1 Test superato in accordo con iso 10545-1 Pren accord avec norme en 10545-1 Test überstanden nach ISO 10545-1		Resistant Resistente Résistants Widerstandsfähig
		Pass according to iso 10545-1 Test superato in accordo con iso 10545-1 Pren accord avec norme en 10545-1 Test überstanden nach ISO 10545-1		Resistant Resistente Résistants Widerstandsfähig
 Frost resistance Resistenza al gelo Résistance au gel Frostbeständigkeit	EN ISO 10545-12	Declared value Valore dichiarato Valeur déclarée Angabener Wert		See single tile picture Vedi immagine Voir sous du carreau photo Siehe einzelnen Abbildungen
		Declared value Valore dichiarato Valeur déclarée Angabener Wert		See single tile picture Vedi immagine Voir sous du carreau photo Siehe einzelnen Abbildungen
		B min.		See single tile picture Vedi immagine Voir sous du carreau photo Siehe einzelnen Abbildungen
 Color resistance to light Resistenza dei colori alla luce Résistance des couleurs à la lumière Lichtbeständigkeit	DIN 51094	No noticeable color change Non devono presentarsi apprezzabili variazioni di colore Ne doivent pas présenter de variations importantes des couleurs Die Muster dürfen keine sichtbaren Farbveränderungen aufweisen		No alteration after testing Materiale inalterato dopo il test Aucune altération relevée Keine Veränderung nach dem Test
		See single tile picture / Vedil minime Voir sous du carreau photo / Siehe einzelnen		See single tile picture / Vedil minime Voir sous du carreau photo / Siehe einzelnen
		See single tile picture / Vedil minime Voir sous du carreau photo / Siehe einzelnen		See single tile picture / Vedil minime Voir sous du carreau photo / Siehe einzelnen
		Available test / Test disponibile Essai disponible / Prüfzeugnis verfügbar		Available test / Test disponibile Essai disponible / Prüfzeugnis verfügbar
		See single tile picture / Vedil minime Voir sous du carreau photo / Siehe einzelnen		Available test / Test disponibile Essai disponible / Prüfzeugnis verfügbar
 Friction coefficient (slipperiness) Coefficiente di attrito (Scivolosità) Coefficient de friction (Glissement) Reibungskoeffizient (Schlupfgrigkeit)	B.C.R.A. D.M.238/ 89	If needed Dove richiesto Si demande Nach Anforderung		See single tile picture / Vedil minime Voir sous du carreau photo / Siehe einzelnen
		ASTM C1028-2007		Available test / Test disponibile Essai disponible / Prüfzeugnis verfügbar
		ANSI A137.1-2012		Available test / Test disponibile Essai disponible / Prüfzeugnis verfügbar
				Available test / Test disponibile Essai disponible / Prüfzeugnis verfügbar

It's advisable to refer Technical Division for all necessary guidelines to a correct use. Si raccomanda di consultare Technical Division per le indicazioni necessarie al corretto utilizzo.

Merci de consulter notre Technical Division pour les indications à un usage correct. Zur korrekten anwendung wird empfohlen unsere Technical Division zu kontaktieren.

Technical details available on: www.energieker.it Schede tecniche consultabili sul sito: www.energieker.it

Technisches Datenblatt auf der Website: www.energieker.it Fiches techniques à consulter sur le site: www.energieker.it

Manufacturer Details:

European Ceramics Approved

BPIR COMPLIANT

Importer Details:

European Ceramic Tiles Ltd

Address: 7A Cowley Place, Rosedale, AKL 0632

NZBN: 9429037294571

Website: euroceramics.co.nz

Weights and measures table

Pesi e misure. Tableau poids et mesures. Gewichts- und Maßtabelle.

Size Formato Format		Thickness Spessore Epaisseur Stärke	Pcs/Box Pz/Scatola Stk/Karton Pieces/Boite	Sqm/Box M ² /Scatola Qm ² /Karton M ² /Boite	Kg/Box Kg/Scatola Kg/Karton Kg/Boite	Box/Pallet Scatola/Pallet Karton/Palette Boite/Palette	Sqm/Pallet M ² /Pallet Qm ² /Palette M ² /Palette	Kg/Pallet Kg/Pallet Kg/Palette Kg/Palette
9x30.2	RETT	9	26	0,78	14,50	60	46,80	873
9,5x57	RETT CHEVRON	9	14	0,78	13,93	48	36,48	688,64
15x30	CAMPIGIANE / ANTICHIAMORI	9,2	28	1,26	25,00	60	75,60	1520
15x30		8,2	32	1,44	25,00	60	86,40	1400
20x20		7,2	38	1,52	24,33	60	91,20	1480
20x40		8,2	20	1,60	28	48	76,80	1360
20x120	RETT*	9	5	1,20	22,70	48	57,60	1100
	RETT*	6	7	1,68	24,19	48	80,64	1181
30x30	CAMPIGIANE / ANTICHIAMORI	9,2	14	1,26	25,33	60	75,60	1540
	RETT*	9	4	1,44	28,60	36	56,16	1130
30x120	RETT*	6	6	2,16	31,10	36	84,24	1232
	RETT	9	7	1,26	24,38	40	50,40	960
30x60	LCP / RST	9	7	1,26	24,38	40	50,40	1050
30,8x61,5		9	7	1,32	24,88	40	52,80	920
60x60	RETT / RST / LCP	9	4	1,44	28,57	30	43,20	812
	RETT / RST / LCP*	9	2	1,44	28,57	35	50,40	1020
60x120	RETT*	6	3	2,16	31,10	35	75,6	1108
80x80	RETT/LCP	9	2	1,28	25,58	45	57,60	1171
20x20	BICOTTURA	6,5	40	1,60	16,66	72	115,20	1212
20x50	BICOTTURA	8	14	1,40	19,45	60	84	1187
20x50	DECORO BICOTTURA	8	14	1,40	18,83	60	84	1150

Fire Resistance

The building code relating to fire rating regulations and standards requires specifiers to provide documentation such as fire certificates for materials used in construction.

Ceramics are in itself a fire-resistant material, mostly being manufactured at over 1200 degrees Celsius. Testing and providing such certification are therefore not relevant to the Ceramics industry.

Ceramic and Porcelain tiles are an inert material, and therefore non-combustible. They do not release fumes or toxic gases in the event of a fire. Porcelain tiles contain no sealants, waxes or other chemicals that could release VOC's into the environment. Ceramics do not pose a risk of spreading or intensifying a fire therefore there is no testing required as they do not contribute to a fire.

EXTRAORDINARY EFFECTS DURING USE PHASE:

Fire: According to /EN 13501-1:2007+A1:2009/, ceramic tiles can be classified as A1 class of fire resistance rating, because they do not contribute to fire.

It has been demonstrated that the coating of the ceramic tiles, in case of fire, reduces heat on them and thus the risk of collapse.

Water: Ceramic tiles cannot react with water because they are an insoluble material.

For further information on the physio-characteristics of fire resistance for tiles please refer to the Technical Documents section on euroceramics.co.nz

Manufacturer Details:

European Ceramics Approved

BPIR COMPLIANT

Importer Details:

European Ceramic Tiles Ltd

Address: 7A Cowley Place, Rosedale, AKL 0632

NZBN: 9429037294571

Website: euroceramics.co.nz