

# THEATRO RANGE

Product Name: **THEATRO - VARIOUS COLOUR/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** 

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.

Suitability *	Residential	Light Commercial	Commercial
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	*	*	*

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## **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.

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#### 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.

## **Technical Information**

#### NORMA DI RIFERIMENTO / SPECIFICATION REFERENCE ISO 13006/EN 14411 APPENDICE G BIA GL

			THEATRO		
aratteristica tecnica achnical feature		Norma Norm	Rettificato / Rectified	Grip	
LUNGHEZZA E LARGHEZZA	LENGTH AND WIDTH		CONFORME / COMPLIANT		
SPESSORE / THICKNESS			CONFORME /	COMPLIANT	
RETTILINEITÀ SPIGOLI / STR	AIGHTNESS OF SIDES	UNI EN ISO	CONFORME /	COMPLIANT	
ORTOGONALITÀ / RECTANGU	LARITY	10545-2	CONFORME / COMPLIANT CONFORME / COMPLIANT		
PLANARITÀ / SURFACE FLAT	NESS				
ASPETTO / ASPECT			CONFORME /	COMPLIANT	
ASSORBIMENTO D'ACQUA WATER ABSORPTION		UNI EN ISO 10545-3	≤ 0,5%		
RESISTENZA A FLESSIONE /	FLEXURAL STRENGTH	UNI EN ISO	≥ 35 N/mm <sup>2</sup>		
MODULO DI ROTTURA / BRE	AKING STRENGTH	10545-4			
DETERMINAZIONE DELLA RE DETERMINATION OF IMPACT		UNI EN ISO 10545-5	0,90		
RESISTENZA ALL'ABRASION ABRASION RESISTANCE (PE		UNI EN ISO 10545-7	PEI 3 + 5		
COEFFICIENTE DI DILATAZIO THERMAL EXPANSION COEF		UNI EN ISO 10545-8	(5,7+5,9) X 10 °/*C		
RESISTENZA AGLI SBALZI TI THERMAL SHOCK RESISTAN		UNI EN ISO 10545-9	RESISTENTE RESISTANT		
DETERMINAZIONE DELLA DI DETERMINATION DUE OF EX	LATAZIONE DOVUTA ALL'UMIDITA PANSION DUE TO HUMIDITY	UNI EN ISO 10545-10	0,0 mm/m		
DETERMINAZIONE DELLA RE DETERMINATION OF CRAZIN		UNI EN ISO 10545-11	RESISTENTE RESISTANT		
RESISTENZA AL GELO FROST RESISTANCE		UNI EN ISO 10545-12	INGELIVO FROST-RESISTANT		
RESISTENZA AGLI AGENTI C RESISTANCE TO CHEMICALS		UNI EN ISO 10545-13	MINIMO CLASSE B MINIMUM CLASS B		
RESISTENZA ALLE MACCHIE STAIN RESISTANCE		UNI EN ISO 10545-14	MINIMO CLASSE 3 MINIMUM CLASS 3		
		DIN 51130	R10	RII	
RESISTENZA ALLO SCIVOLAMENTO SLIP RESISTANCE	MENTO	DIN 51097	A+B	A+B+C	
		C.o.F B.C.R./D.M. 236 14/6/89	>0,40	>0,40	
		D.C.o.F / ANSI A326.3	>0,42	>0,42	
REAZIONE AL FUOCO REACTION TO FIRE		96/603/CE	Al <sub>FL</sub> /	Al	
GRADO DI VARIAZIONE CE SHADE VARIATION	OMATICA	ANSI A137.1	V2	V2	

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	pcs/box	mq/box	kg/box	box/pallet	mq/pallet	kg/pallet	fascia prezzo price range
60x120 24"x48" Rettificato Rectified R10 / R11	2	1,44	28,40	36	51,84	1022,40	149
80x80 32"x32" Rettificato Rectified R10	2	1,28	24,96	40	51,20	998,40	149
40x80 16"x32" Rettificato Rectified R10	3	0,96	18,66	28	26,88	522,48	149
60x60 24"x24" Rettificato Rectified 20 mm RII	2	0,74	31,83	30	22,20	955,00	167
60x60 24"x24" Rettificato Rectified RI0 / RII	3	1,08	21,30	40	43,20	852,00	130
30x60 12"x24" Rettificato Rectified RIO / RII	6	1,08	21,00	48	51,84	1008,00	130
10x30 4"x12" Rettificato Rectified R10	32	0,96	19,30	36	34,56	694,80	169

### **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

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