

European  
Ceramics

## ALCHEMICA RANGE

Product Name:           ALCHEMICA - **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

<b>Scope</b>	<b>Use</b>
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.

<b>Suitability *</b>	<b>Residential</b>	<b>Light Commercial</b>	<b>Commercial</b>
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.

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# Technical Information

## TECHNICAL FEATURES | CARATTERISTICHE TECNICHE

TECHNICAL FEATURES GLAZED PORCELAIN STONEWARE  
CONFORMING TO EUROPEAN STANDARDS EN 14411 ISO 13006 APP. G (GROUP BIA GL EB ≤ 0,5%)

CARATTERISTICHE TECNICHE GRÉS PORCELLANATO SMALTATO Conformi a Norme Europee EN 14411 ISO 13006 App. G (Gruppo BIA GL Eb ≤ 0,5%)  
TECHNISCHE EIGENSCHAFTEN GLASIERTES FEINSTEINZEUG Gemäß den Europäischen Normen EN 14411 ISO 13006 App. G (Gruppe BIA GL Eb ≤ 0,5%)  
CARACTÉRISTIQUES TECHNIQUES GRÉS CÉRAMÉ ÉMAILLÉ Conformes aux Normes Européennes EN 14411 ISO 13006 App. G (Groupe BIA GL Eb ≤ 0,5%)

	TECHNICAL FEATURES CARATTERISTICHE TECNICHE TECHNISCHE DATEN CARACTÉRISTIQUES TECHNIQUES	TESTING METHOD METODO DI PROVA PRÜFVERFAHREN NORME D'ESSAIS	REFERENCE STANDARD RIFERIMENTO NORMA STANDARDWERT RÉFÉRENCE NORME		TEST RESULTS VALORE PRODOTTO PRODUKT WERTE RÉSULTATS DE L'ESSAI
			7mmx15cm	N ≥ 15 cm	
	Sizes Dimensioni Abmessungen Dimensions	EN ISO 10545-2	<ul style="list-style-type: none"> <li>Length and width - Lunghezza e larghezza Länge und Breite - Longueur et largeur ±0,9mm ±0,6% ±2,0mm</li> <li>Thickness - Spessore - Stärke - Épaisseur ±0,5mm ±5,0% ±0,5mm</li> <li>Linearity - Rettilinearità spigoli - Kanten geradheit - Rectitude des arêtes ±0,75mm ±0,5% ±1,5mm</li> <li>Wedging - Ortogonalità - Rechtwinkligkeit Orthogonalité ±0,75mm ±0,5% ±2,0mm</li> <li>Warpage - Planarità - Ebenförmigkeit Planéité</li> </ul>	95% min.	Compliant Conforme Erfüllt Conforme
	Water absorption Assorbimento acqua Wasseraufnahme Absorption d'eau	EN ISO 10545-3	Eb < 0,5%		Compliant Conforme Erfüllt - Conforme
	Modulus of rupture Resistenza alla flessione Biegefestigkeit Résistance à la flexion	EN ISO 10545-4	Min. 35N/mm <sup>2</sup>		Compliant Conforme Erfüllt - Conforme
	Abrasion resistance Resistenza all'abrasione Abriebbeständigkeit Résistance à l'abrasion	EN ISO 10545-7	CLASS 0-5		From 4 to 5 Da 4 a 5 - Von 4 bis 5 De 4 jusqu'à 5
	Thermal expansion coefficient Coefficiente di dilatazione termica lineare Wärmeausdehnung Coefficient de dilatation thermique linéaire	EN ISO 10545-8	Declared value Valore dichiarato Anggebener Wert Valeur déclaré		≤ 9 MK-1
	Thermal shock resistance Resistenza agli sbalzi termici Temperaturwechselbeständigkeit Résistance aux écarts de température	EN ISO 10545-9	Pass according to ISO 10545-1 Test superato in accordo con ISO 10545-1 Test überstanden nach ISO 10545-1 Py en accord avec norme en 10545-1		Resistant Resistente Widerstandsfähig Résistant
	Glaze crazing resistance Determinazione della resistenza al cavillo Glasurearrißbeständigkeit Résistance aux taches	EN ISO 10545-11	Required Richiesta Gefordert Requise		Resistant Resistente Widerstandsfähig Résistant
	Frost resistance Resistenza al gelo Frostbeständigkeit Résistance au gel	EN ISO 10545-12	Pass according to ISO 10545-1 Test superato in accordo con ISO 10545-1 Test überstanden nach ISO 10545-1 Py en accord avec norme en 10545-1		Resistant Resistente Widerstandsfähig Résistant
	Resistance to low concentrations of acids and alkali   Resistenza a basse concentrazioni di acidi e alcali   Beständigkeit gegen schwach konzentrierten Säuren und Laugen Résistance à des basses concentrations d'acides et bases	EN ISO 10545-13	Declared value Valore dichiarato Anggebener Wert Valeur déclaré		From GLA to GLB Da GLA a GLB Von GLA bis GLB De GLA jusqu'à GLB
	Resistance to high concentrations of acids and alkali   Resistenza ad alte concentrazioni di acidi e alcali   Beständigkeit gegen stark konzentrierten Säuren und Laugen Résistance à des hautes concentrations d'acides et bases		Declared value Valore dichiarato Anggebener Wert Valeur déclaré		From GHA to GHB Da GHA a GHB Von GHA bis GHB De GHA jusqu'à GHB
	Resistance to domestic chemicals and additives for swimming pools   Resistenza ai prodotti chimici di uso domestico e agli additivi per piscina   Beständigkeit gegen chemischen Haushaltsreiniger und Zusatzstoffe für Schwimmbäder Résistance aux prod. chimiques d'usage domestique et additifs pour piscines		GB min.		GA
	Stain resistance of glazed porcelain Resistenza alle macchie di piastrelle smaltate Fleckenbeständigkeit von glasierten Fliesen Résistance aux taches des carreaux émaillés	EN ISO 10545-14	Class 3 min Classe 3 min Gruppe 3 min. Classe 3 min		CLASS 5



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## 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 fire performance characteristics of ceramic/porcelain tiles or natural stone, please refer to the Technical Documents section on [euroceramics.co.nz](http://euroceramics.co.nz)**

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