DUNES GREIGE MATT 600x600

Class 1 Building Product Information Requirements Self-Assessment

Product Name: DUNES GREIGE MATT 600X600

Product Identifier: DUNGREM60

Product Description: A glazed porcelain tile with a matt finish and a water absorption rate of less than 0.81%.

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

BPIR COMPLIANT

GIOVANNI TILES

Scope	Use
B2 Durability	See below Suitability table.
C3 Fire	The Building Code relating to fire ratings regulation and 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	Not acceptable for use under D1/AS1
E3 Internal Moisture	Under E3 Tiles installed over a waterproof membrane using a nonporous Grouting system, are an acceptable solution.
G3 Food Preparation and Prevention from Contamination	As an Impervious and easy to clean Surface this range complies
G6 Airborne and Impact Sound	If required Tiles can form part of an acoustic system to comply with IIC and STC in conjunction with an approved third-party system.

Suitability	Residential	Light Commercial	Commercial	Industrial
Indoor Floor	✓	✓	-	-
Indoor Walls	✓	✓	✓	✓
Outdoor Floor	✓	-	-	-
Outdoor Cladding	✓	✓	✓	✓
Frost Resistant	✓	✓	✓	✓
Swimming Pool Submerged	✓	✓	✓	✓
Swimming Pool Surround	✓	-	-	-
Paving	-	-	-	-
Over Underfloor Heating	✓	✓	✓	✓
Commercial Kitchen Wall	✓	✓	✓	✓
Within 1.5m of a Plumbing Fixture or Fitting	✓	✓	✓	✓

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

Specifications	
CODE	DUNGREM60
TILE SIZE (mm)	600x600
THICKNESS (mm)	9.5
SUITABILITY	Floor/Wall
FINISH	Matt
CLASS	PEI Class 3: Light to moderate traffic. Countertops, walls and floors for normal foot traffic.
RECTIFIED	Yes
WEIGHT (kg)	7.37
COEFFICIENT OF FRICTION	
SLIP RATING	
TILES PER BOX	4
M2 PER BOX	1.44
PATTERNS/FACES	6
COUNTRY OF ORIGIN	China

Building Code Clause and Contribution

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 are 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.
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.

TESTING
CNAS L1978

2013002473Z

检 测 报 告
TEST REPORT

报 告 编 号:
REPORT NO. : 25201802085

样 品 名 称:
NAME OF SAMPLE: 釉面砖 GLAZED TILES

委 托 单 位:
APPLICANT: 艾斯塔四季有限公司 ESTAZZIONE CO.,LTD.

检 验 日 期:
DATE OF TEST: 27/05/2018 – 11/06/2018 (dd/mm/yy)

国 家 建 筑 卫 生 陶 瓷 检 测 重 点 实 验 室
STATE KEY TESTING LABORATORY OF BUILDING CERAMICS AND SANITARY WARE
佛山出入境检验检疫局检验检疫综合技术中心
INSPECTION AND QUARANTINE COMPREHENSIVE TECHNOLOGY CENTRE
OF FOSHAN ENTRY-EXIT INSPECTION & QUARANTINE BUREAU

佛山出入境检验检疫局检验检疫综合技术中心

INSPECTION AND QUARANTINE COMPREHENSIVE TECHNOLOGY CENTRE OF FOSHAN ENTRY-EXIT INSPECTION & QUARANTINE BUREAU

检测报告

TEST REPORT

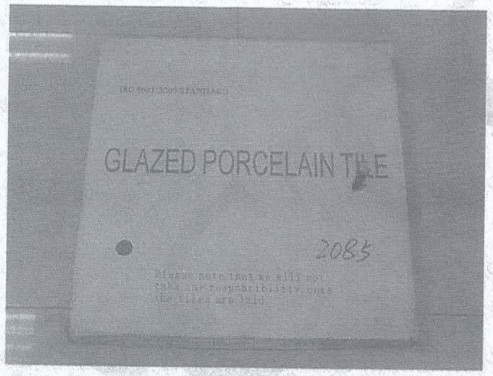
报告编号： 25201802085

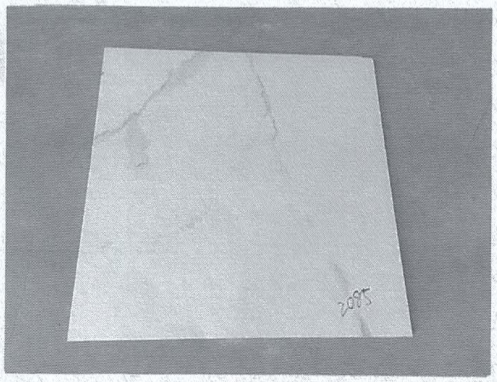
Report No:

样品名称 Name of sample	釉面砖 GLAZED TILES	名义尺寸 Nominal size (N)	60cm×60cm
表面特性 Nature of the surface	有釉砖 Glazed (GL)	工作尺寸 Work size (S_w)	600mm×600mm×9.5mm
类别 Group	BⅠb	样品描述 Description of Samples	样品完好,适合测试 The samples are sound, intact and fit for test.
样品标记 Mark of samples	CA001P	样品数量 Quantity of samples	30 块 30 Pieces
委托单位 Applicant	艾斯塔四季有限公司 ESTAZZIONE CO.,LTD	委托单位地址 Address of applicant	广东省佛山市禅城区金盈绿岛中心A2座A2,B JINYING LVDAO CENTRE, CHANCHENG,FOSHAN, GUANGDONG.
委托单位电话 Telephone of applicant	86-757-83557350	委托单位传真 Fax of applicant	86-757-83557350
样品来源 Source of Samples	委托单位自送样品 Samples selected by applicant	接样日期 Received on	27/05/2018
检验依据 Test Standard	1. ISO 13006:2012 *Ceramic tiles – Definitions, classification, characteristics and marking* Annex G Dry-pressed ceramic tiles with water absorption $0,5 < E_b \leq 3\%$ Group BⅠb 3. DIN 51130:2010 *Testing of floor covering – Determination of the anti-slip properties – Workrooms and fields of activities with slip danger, walking method – Ramp test*		
检验结论 Conclusion of Test	1. 样品经检验,所检验项目的检验结果符合 ISO 13006:2012 标准中附录 G 的规定。 The results conform to the requirement of Annex G of standard ISO 13006:2012 with respect to the test items. 2. 防滑性能的检验结果见报告第 6 页。 The test results of Slip resistance see Page 6.		
检验单位盖章 Stamp of Test Unit	日期：19/06/2018 Date:	检验单位联系方式 Address of Test Unit	地址：广东省佛山市禅城区魁奇一路澜石（国际）金属交易中心十八座二楼 Address : 2/F, Building 18, Lanshi International Metal Exchange Center, Kuiqiyi Road, Chancheng District, Foshan, Guangdong, China (528000) 电话（Tel）：86-757-83960558 86-757-83827991 传真（Fax）：86-757-83827971 邮箱（E-mail）：fsiqtc@163.com 网址（url）：http://www.fsiqtc.com/
声明 Notes	1、我们已尽所知所能实施上述检验，不能因签发本报告而免除有关各方根据合同和法律所承担的责任和义务； All inspections are carried out conscientiously to the best of our knowledge and ability. This report does not in any respect absolve the other related parties from his contractual and legal obligations. 2、未经本实验室书面许可，不得部分复制本报告； This report shall not be reproduced, except in full, without the prior written approval from the issuing laboratory. 3、本报告仅是样品的检测结果。 The results in this report apply to the samples only.		

检验 Tested by _____ 审核 Inspected by _____ 批准 Approved by _____

样品照片
Photo of Samples





佛山出入境检验检疫局检验检疫综合技术中心
INSPECTION AND QUARANTINE COMPREHENSIVE TECHNOLOGY CENTRE OF FOSHAN ENTRY-EXIT INSPECTION & QUARANTINE BUREAU

检测报告
TEST REPORT

ISO 13006:2012 *Ceramic tiles – Definitions, classification, characteristics and marking*

条款 Clause	性能 Properties	检验方法 Test Method	要求 Requirements		检验结果 Results	判定 Verdicts
附录 G 表 G.1 Annex G Table G.1	**尺寸和表面质量** **Dimensions and surface quality**					
	长度和宽度 **Length and Width** 每块砖的平均尺寸相对于工作尺寸的允许偏差为 S_w The deviation,of the average size for each tile (4 sides) from the work size, S_w	ISO10545-2	N≥15cm	±0.6%	-0.08%~-0.06%	P
				±2.0mm	-0.5mm~-0.3mm	P
	厚度 **Thickness**					
	制造商应声明厚度 The thickness shall be specified by the manufacturer	—	声明厚度 Declared thickness		9.5mm	—
	每块砖厚度的平均值相对于工作尺寸的最大允许偏差 The deviation of the average thickness of each tile from the work size thickness	ISO10545-2	N≥15cm	±5%	-1.34%~+0.68%	P
				±0.5mm	-0.1mm~+0.1mm	P
	边直度 **Straightness of sides** 相对于工作尺寸的最大允许偏差 The maximum deviation from straightness related to the corresponding work sizes	ISO10545-2	N≥15cm	±0.5%	-0.01%~+0.01%	P
				±1.5mm	-0.1mm ~+0.1mm	P
	直角度 **Rectangularity** 相对于工作尺寸的最大允许偏差 The maximum deviation from Rectangularity related to the corresponding work sizes	ISO10545-2	N≥15cm	±0.5%	-0.11%~+0.11%	P
				±2.0mm	-0.7mm~+0.6mm	P
	表面平整度: 最大允许偏差 **Surface flatness**: The maximum deviation from flatness					
	a)对于由工作尺寸计算的对角线的中心弯曲度 a) centre curvature, related to diagonal calculated from the work size;	ISO10545-2	N≥15cm	±0.5%	+0.02%~+0.04%	P
				±2.0mm	+0.1mm~+0.3mm	P
	b)对于由工作尺寸计算的边弯曲度 b) edge curvature, related to the corresponding work sizes;	ISO10545-2	N≥15cm	±0.5%	+0.04%~+0.06%	P
				±2.0mm	+0.2mm~+0.4mm	P
	c)对于由于工作尺寸计算的对角线的翘曲度 c) warpage, related to diagonal calculated from the work size.	ISO10545-2	N≥15cm	±0.5%	-0.08%~-0.05%	P
				±2.0mm	-0.7mm~-0.5mm	P
	表面质量 **Surface quality**	ISO10545-2	至少有 95%的砖其主要区域无明显缺陷 A minimum of 95% of the tiles shall be free from visible defects inspected vertically at 1.0m.		100%	P

ISO 13006:2012 *Ceramic tiles – Definitions, classification, characteristics and marking*

条款 Clause	性能 Properties	检验方法 Test Method	要求 Requirements	检验结果 Results	判定 Verdicts
附录 G 表 G.1 Annex G Table G.1	**物理性能 Physical properties**				
	吸水率 质量分数 **Water absorption** Percent mass fraction	ISO 10545-3	0.5<E_b≤3%	0.81%	P
			单个值不大于 3.1% Individual maximum 3.1%	0.72%~1.22%	P
	破坏强度/N Breaking strength, in N	ISO 10545-4	≥1300	2178	P
	断裂模数/(N/mm²) Modulus of rupture, in N/mm² 不适用于破坏强度≥ 3000N 的陶瓷砖 Not applicable to tiles with breaking strength ≥ 3000N	ISO 10545-4	平均值≥35 Minimum 35	46.5	P
			单个值≥32 Individual minimum 32	44.6~48.6	P
	抗冲击：恢复系数 Impact resistance: Coefficient of restitution (COR)	ISO 10545-5	报告检验结果 Test method available	0.88	—
	耐磨性 Abrasion resistance 用于地面的有釉砖的表面耐磨性 Resistance to surface abrasion of glazed tiles intended for use on floors	ISO 10545-7	报告耐磨级别 Report abrasion class	4 级 Class 4	—
			报告耐磨转数 Report cycles passed	750	—
	线性热膨胀系数： 室温~100℃ **Coefficient of linear thermal expansion:** from ambient temperature to 100℃	ISO 10545-8	报告检验结果 Test method available	$6.1\times10^{-6}K^{-1}$	—
	抗热震性 Thermal shock resistance	ISO 10545-9	报告检验结果 Test method available	样品经试验，无炸裂或裂纹 Fully resistance	—
	湿膨胀/(mm/m) Moisture expansion, in mm/m	ISO 10545-10	报告检验结果 Test method available	0.01	—
	抗釉裂性： 有釉砖 **Crazing resistance:** glazed tiles	ISO 10545-11	应通过此项测试 Required	样品经试验，无裂纹或剥落 Fully resistance	P
	抗冻性 Frost resistance	ISO 10545-12	报告检验结果 Test method available	所有样品无裂纹或破损 Fully resistance	—
	化学性能 Chemical properties				
	耐污染性 Resistance to staining				
	a)轻油中的铬绿 a) Green staining agent in light oil	ISO 10545-14	不低于 3 级 Minimum Class 3	5 级 Class 5	P
	b)轻油中的红色污染物 b) Red staining agent in light oil	ISO 10545-14	不低于 3 级 Minimum Class 3	5 级 Class 5	P
	c) 13g/L 碘酒液 c) Iodine, 13g/L solution in alcohol	ISO 10545-14	不低于 3 级 Minimum Class 3	5 级 Class 5	P
	d)橄榄油 d) Olive oil	ISO 10545-14	不低于 3 级 Minimum Class 3	5 级 Class 5	P

ISO 13006:2012 *Ceramic tiles – Definitions, classification, characteristics and marking*

条款 Clause	性能 Properties	检验方法 Test Method	要求 Requirements	检验结果 Results	判定 Verdicts
附录 G 表 G.1 Annex G Table G.1	**耐化学腐蚀性 Resistance to chemicals**				
	耐家庭化学试剂和游泳池盐类 Resistance to household chemicals and swimming pool salts				
	a) 家庭化学试剂：氯化铵溶液，100g/L a) Household chemicals: Ammonium chloride, 100g/L	ISO 10545-13	不低于 GB Minimum GB	GA(V)	P
	b) 游泳池盐类：次氯酸钠溶液，20mg/L b) Swimming pool salts: Sodium hypochlorite solution, 20mg/L	ISO 10545-13	不低于 GB Minimum GB	GA(V)	P
	耐低浓度酸和碱 Resistance to low concentrations of acids and alkalis				
	a) 3%盐酸溶液(v/v) a) Hydrochloric acid solution, 3% (v/v)	ISO 10545-13	制造商应声明等级 Manufacturer to state classification	GLA(V)	—
	b) 柠檬酸溶液，100g/L b) Citric acid solution, 100g/L	ISO 10545-13	制造商应声明等级 Manufacturer to state classification	GLA(V)	—
	c) 氢氧化钾溶液，30g/L c) Potassium hydroxide, 30g/L	ISO 10545-13	制造商应声明等级 Manufacturer to state classification	GLA(V)	—
	耐高浓度酸和碱 Resistance to high concentrations of acids and alkalis				
	a) 18%盐酸溶液(v/v) a) Hydrochloric acid solution, 18% (v/v)	ISO 10545-13	报告检验结果 Test method available	GHA(V)	—
	b) 5 %乳酸溶液(v/v) b) Lactic acid, 5 % (v/v)	ISO 10545-13	报告检验结果 Test method available	GHA(V)	—
	c) 氢氧化钾溶液，100g/L c) Potassium hydroxide, 100g/L	ISO 10545-13	报告检验结果 Test method available	GHA(V)	—

用语说明 Possible test case verdicts
1. P(ass)：合格 *Test item does meet the requirement.*
2. F(ail)：不合格 *Test item does not meet the requirement.*
3. —：未进行判定 *Verdict was not carried out.*
4. N/A：不适用 *Test case does not apply to the test item.*

DIN 51130:2010 *Testing of floor covering – Determination of the anti-slip properties – Workrooms and fields of activities with slip danger, walking method – Ramp test*

性能 Properties	检验方法 Method	检验结果 Results
防滑性能（倾斜平台法） Slip resistance (Ramp test)	DIN 51130	平均临界角: 8.2° 防滑类别: R9 Mean overall acceptance angle: 9.8° Slip resistance assessment group: R9

*** ***

报告结束 End of Test Report

FIRE PERFORMANCE

BE 100% CONFIDENT IN THE PRODUCTS YOU SPECIFY

tile warehouse
for design inspiration

"The Grenfell Tower tragedy in London highlights the importance to specifiers of ensuring the products they specify (from flooring to cladding materials) are fire-resistant in order to conform to the building code relating to fire rating regulations."

TILES DO NOT REQUIRE TESTING AS THEY DO NOT CONTRIBUTE TO FIRE

In New Zealand, fire ratings are required by the Building Code to ensure that if a building is on fire, its construction materials do not significantly increase the spread or intensity of a fire. Tiles, being non-combustible, do not require testing as they do not contribute to fire. Aside from this, tiles by nature do not contain any form of petroleum-based product or wood fibres and are in essence, fire-proof and non toxic!

The building code relating to fire rating regulations and standards became 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.

WHAT YOU NEED TO KNOW:

- Because most ceramics are manufactured at over 1000 degrees celsius, they become fire-resistant and therefore an obvious choice for both commercial and residential floor and wall surfaces. For example, if a lighted cigarette is dropped on the floor, it will not do any damage to the tile. Even hot kitchen pans or skillets will not scorch or melt the surface of tile, let alone set the tile on fire.
- Tiles are non-combustible so do not catch fire, nor do they give off toxic fumes in the form of VOC's (Volatile Organic Compounds) affecting breathing, when exposed to fire.
- During the manufacture of tiles, any VOC's that may have been present in clays or binders are completely burned away which ensures the final product is inert.

A safe and simple approach with regards to Fire performance in products is to utilise tile for both **Floor** and **Wall** areas. To view latest styles and designs to suit Commercial Projects, see our tile and stone range;
https://www.tilewarehouse.co.nz/tile-stone-range/