KERABEN GROUP

22/01/2018

TECHNICAL DATA OF PRODUCT

-CONTROL LABORATORY-

CODE	**GOW0R002**
ITEM	**KB MIXIT GRIS**
FORMAT	**75 X 75**
GROUP	**Bla - Annexe G - DOP: PPBIA-ANT-002**
BODY	COLOURED BODY PORCELAIN
FINISH	RECTIFIED PRODUCT WITH VERY HIGH SHADE VARIATION
CLASS	Unglazed
ANALISIS OF PRODUCTION (Constant test)	2017
RECOMMENDATIONS FOR USE	5 High traffic. Commercial areas, halls and public buildings
AREA OF USAGE	Dry interiors with less than 6% inclination. / Exterior Facades. *(see applicable safety regulations)
PATTERN	14
FIXING	Minimal grout joint: interiors 2 mm/exteriors 3 mm. A product suitable for modular installation. For a modular installation, shade and caliber compatibility must be specifically requested when placing order. In modular installation, 2 mm grout joint.

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TECHNICAL SPECIFICATIONS OF THE PRODUCT AS PER THE NORMS UNE-EN ISO 13006 AND EN 14411

PHYSICAL PROPERTIES

	TEST-NORM	PRESCRIBED VALUE OF NORM	KERABEN
SLIP RESISTANCE	UNE-ENV 12633	Class >= 1	Class 1 (1)
	ANSI A137: DCOF	Manufacturer's declaration	NOT APPLICABLE (2)
	DIN 51130	R >= 9	R9 (3)
	DIN 51097	Manufacturer's declaration	NOT APPLICABLE (4)
HARDNESS MOHS	UNE 67-101	Manufacturer's declaration	5
WATER ABSORPTION	UNE-EN ISO 10545-3	<=0,5%	< 0,15%
BREAKING STRENGTH	UNE-EN ISO 10545-4	1300 N	2.500 N
MODULUS OF RUPTURE	UNE-EN ISO 10545-4	35 N/mm²	49 N/mm²
RESISTANCE TO ABRASION	UNE-EN ISO 10545-6	<= 175 mm³	< 130 mm³
IMPACTO	UNE-EN ISO 10545-5	Manufacturer's declaration	RESISTS
COEFFICIENT OF EXPANSION	UNE-EN ISO 10545-8	Max. $9 \cdot 10^{-6} K^{-1}$	$6,2 \cdot 10^{-6} K^{-1}$
THERMAL RESISTANCE	UNE-EN ISO 10545-9	Manufacturer's declaration	RESISTS
CRAZING RESISTANCE	UNE-EN ISO 10545-11	Required	RESISTS
FROST RESISTANCE	UNE-EN ISO 10545-12	Manufacturer's declaration	RESISTS

NPD: No performance determined

(1) UNE-ENV 12633. Class 1: Indicated for interior dry areas with surfaces having no more than a 6% inclination.

(3) DIN 51130: It´s recommended R >= 9 for indoors and R >= 11 for outdoors when the slip resistance is required.

CHEMICAL PROPERTIES

			TEST-NORM	NORM ISO 13006	KERABEN
	RESISTANCE TO ACIDS (WEAK)	CITRIC ACID	UNE-EN ISO 10545-13	Manufacturer's declaration	Class ULA (5)
		HYDROCHLORIC ACID	UNE-EN ISO 10545-13	Manufacturer's declaration	Class ULA (5)
		POTASSIUM HYDROXIDE (ÁLKALI)	UNE-EN ISO 10545-13	Manufacturer's declaration	Class ULA (5)
	RESISTANCE TO ACIDS (STRONG)	LACTIC ACID	UNE-EN ISO 10545-13	Manufacturer's declaration	Class UHA (5)
		HYDROCHLORIC ACID	UNE-EN ISO 10545-13	Manufacturer's declaration	Class UHA (5)
		POTASSIUM HYDROXIDE (ÁLKALI)	UNE-EN ISO 10545-13	Manufacturer's declaration	Class UHA (5)
	RESISTANCE TO HOUSEHOLD CLEANING PRODUCTS		UNE-EN ISO 10545-13	Minimum UB	Class UA (5)
	RESISTANCE TO STAINING		UNE-EN ISO 10545-14	Minimum Class 3	Class 5 (5)

(5) Classes UA, ULA and UHA mean that no visual effect is observed if a test solution is applied.

(6) Class 5 means that the stains produced with test solutions can be cleaned with a wet cloth.

DIMENSION TEST-NORM UNE-EN ISO 10545-2

		NORM ISO 13006		KERABEN	
	LENGTH	± 0,60 %	± 2,00 mm	± 0,04 %	B: 747,0±0,30mm
	WIDTH	± 0,60 %	± 2,00 mm	± 0,04 %	B: 747,0±0,30mm
	THICKNESS	± 5 %	± 0,49 mm	± 5 %	9,80 ± 0,49 mm
	STRAIGHTNESS OF SIDES	± 0,50 %	± 1,50 mm	± 0,08 %	<= 0,60 mm
90°	SQUARENESS	± 0,50 %	± 2,00 mm	± 0,08 %	<= 0,60 mm
	SURFACE FLATNESS	± 0,5 %	± 2,00 mm	+0,12% / –0,08%	+0,90mm / –0,60mm

RECOMMENDED JOINTS BY TYPE OF SURFACE

	INDOOR FLOORS		INDOOR WALLS		OUTDOOR FLOORS		FAÇADES		SUGGESTED SALES PRODUCT
	MINIMUM WIDTH	MAXIMUM SURFACE AREA	MINIMUM WIDTH	MAXIMUM SURFACE AREA	MINIMUM WIDTH	MAXIMUM SURFACE AREA	MINIMUM WIDTH	MAXIMUM SURFACE AREA	UNE EN 13888
TILE JOINT	Non-rectif >=2,5mm Rectified >= 2mm	In the whole surface	Non-rectif >= 2,5 mm Rectified >= 2 mm	In the whole surface	Non-rectif >= 2,5 mm Rectified >= 2 mm	In the whole surface	>= 2,5 mm	In the whole surface	WALL OR FLOOR TILES: Fugabella ECO Porcelana 0-5 (CG2'WA) (0 - 5 mm) FAÇADES: Fugabella ECO 2-12 (CG2'WA) (2 - 12 mm)
PERIMETER JOINT	>=5 mm	Round the perimeter of the surface in rooms of over 7m2	>=5 mm	Round the perimeter of the surface in rooms of over 7m2	>=5 mm	Round the perimeter of the surface in rooms of over 7m2	>=5 mm	Round the perimeter of the surface and inner corners and, in general, at special points where movement in the ceramic tiles is needed	Fugabella ECO PU (8 - 35 mm)
EXPANSION/PARTITION JOINT	>=5 mm	40 - 80 m2	>=5 mm	40 - 80 m2	>=5 mm	20 - 40 m2or very 8 to 10 linear metres	8 - 10 mm	9 - 12 m2or every 8 to 10 linear metres. Particularly restrictive if the tiles are dark in colour.	Fugabella ECO PU (8 - 35 mm)
STRUCTURAL JOINT	The width of the structural joint in the substrate	Continuining the building's structural joint	The width of the structural joint in the substrate	Continuing the building's structural joint	The width of the structural joint in the substrate. It must include a bead of polyurethane or compensation profile	Continuing the building's structural joint	The width of the structural joint in the substrate. It must include a bead of polyurethane or compensation profile. 6 - 35 mm	Continuing the building's structural joint	Fugabella ECO PU 40 (6 - 35 mm)

Tile joint: Joints between adjoining tiles designed to offset expansion and contraction and to conceal slight dimensional differences in the pressed tiles.
Perimeter joint: Joints that must be left round the edges of wall and floor surfaces and round vertical elements like columns, partition walls etc.
Expansion/partition joint: Joints that run between tiles, dividing up a tiled surface or its length, depending on the location of the tiled surface, indoors or out. They are designed to offset expansion and contraction and to conceal slight nominal differences in the pressed tiles.
Structural joint: Joints in the substrate to absorb possible structural movements, regardless of the type of covering bonded to it. For this reason, structural joints coinciding with the ones in the substrate must also be left between the tiles.

TYPES OF GROUTING MATERIALS
CG1: Normal cementitious grouts
CG2: Improved cementitious grouts
RG: Synthetic resins (generally epoxy)
L: Portland cement grout, only recommended for undemanding situations, such as indoor areas with no additional stresses. Not recommended for areas subject to thorough cleaning or strict hygiene conditions or bathrooms, given its high porosity.

INSTRUCTIONS FOR FIXING THE PRODUCT, MAINTENANCE & CLEANING

To achieve optimum results in the laying of this product it is essential that you carry out the following recommendations :

Before fixing

· Prior to the setting of the tile, verify that the ceramic product adjusts to the job specification. The number code and alphabetic code appearing on the box label refers to the shade and caliber respectively . Do not mix and match tiles from cartons showing different shade and caliber information on the same installation site.

· Handle the tiles with care to avoid problems of chipping and scratching.

· Plaster the walls and screed the floors before laying.

During fixing

· To fix the tiles, use a quality cement / adhesive and comb both walls, floors and the pieces themselves, combing with a jagged trowel of a size suitable to the format of the tile in question.
· The use of traditional gouts, used for white or red bodied glazed tiles, will not guarantee good adhesion of porcelain tiles. To guarantee good adhesion to the base, for porcelain tiles, the use of specific adhesive and grout is essential.
· In areas requiring waterproof reinforcement, use special epoxi waterproof mortars to seal the grouts. For an adequate waterproof sealing between bath walls and bathtub , the usage of an specific PVC glued profile, a special epoxi waterproof mortar or an special elastic waterproof silicone grout is recommended.
· When sealing , use the appropriate tools such as serrated trowels, drop hammer and rubber trowels. Do not use wedges to set the width of joint. For optimal placement is recommended mechanisms such as leveling pins.
· The sides of the tiles must be perfectly clean before the next tile can be laid. The tiles must be laid perfectly straight in order to maintain the vertical and horizontal alignment of all of the joints. In those cases in which you wish to bond the tiles, it should not be more than 20% of the tile.
· With polished and/or rectified material, the tiles are slightly bevelled, to avoid chipping and simplify laying. For this type of material, when joining the tiles, a gap of at least 1,5 mm must be left for rectified wall tiles and 2 mm for rectified floor tiles, which will then be grouted with “fine seal” type grout, free of any aggregates. In case of non-rectified material, the gap left for the joint must always be at least 2,5 mm wide. Sealing materials that contain “carbon black” (black grout) must not be used.
· On walls with internal angles, 5 millimetres of space must be left free for posible expansion of the tiles. It will be necessary to correctly and accurately plan and do 5 mm perimeter boundary joints on surfaces greater than 7 sq. meters, and 5 mm of expansion joints every 20 to 40 sq. meters of surface for exteriors and double that for interiors. Laying without joints is not recommended from a technical point of view.

After fixing / Maintenance

· Once the grouting process has been finished, we must remove any excess grout, before it can harden, going ahead with a first cleaning, using non-abrasive products (hydrofluoric acid and derivatives). The use of hot water with a neutral detergent is enough.
· Placed tiles must be properly protected untill the construction activity finishes.

· For cleaning the tiles, you must use a clean sponge. Do not use a scourer or any other materials that might scratch the surface of the tiles. Do not use any product that is abrasive or excessively acidic.

For a good maintenance of the ceramic floor tili, we recomend the use of a neutral detergent of high cleaning power as FilaCleaner.

Recommendations for cases of intense and/or embedded dirt:	Product to use:
· Cement, lime water, stripes metals, oxides.	DETERDEK
· Waste epoxy joints resin.	FILA CR10
· Fats, beverages, food, rubber, dyes, marker, plastic paint droplets.	FILA PS/87
· Graffitis.	FILA NOPAINT STAR
· Candel wax, tree resins, waste adhesive tape	FILASOLV

OTHER CONSIDERATIONS

· In case the product ordered is for installation of Ventilated facades or bonded facades, please contact Keraben Systems for consultation and assistance.
· Laying the tiles means that they have been accepted, and , as a result, no claims will be accepted for material installed, arising from a failure to comply with these premises.
· The data shown in the next technical page are valid only for the samples of the particular production previously reviewed.
· For proof of actual productions, you must contact Keraben Group S.A. directly.