

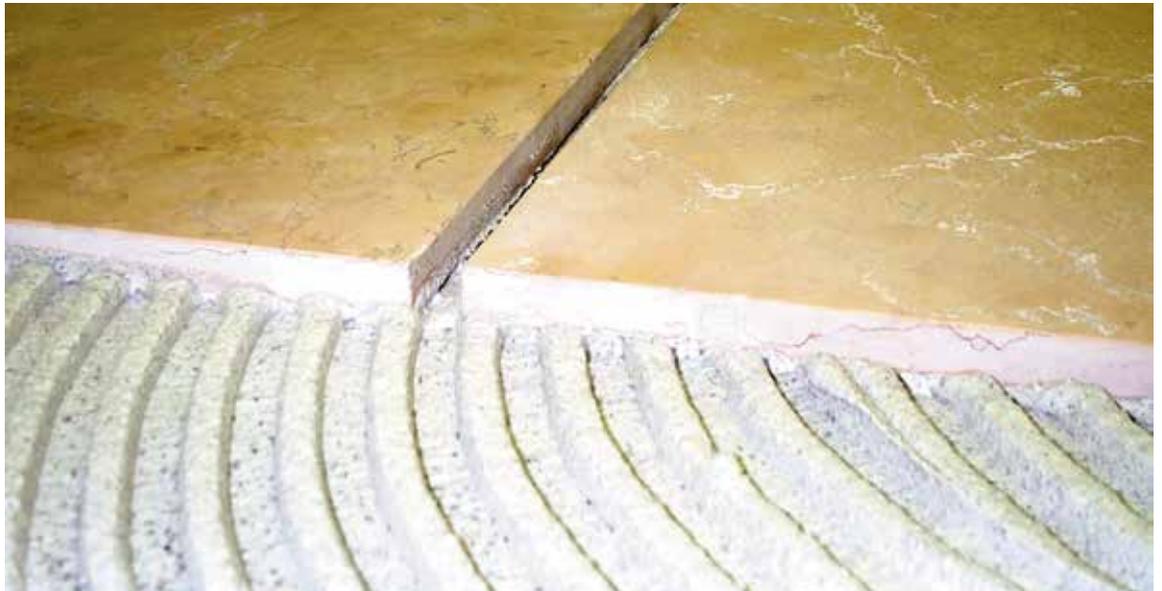
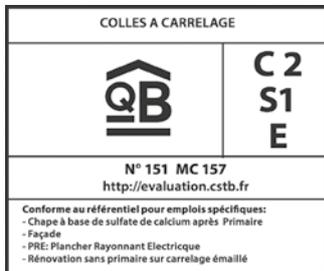


# BENFERFLEX C2

Fiber reinforced flexible adhesive

- High flexibility
- No vertical sliding
- Ideal for exterior application
- Ideal for heated screeds
- Ideal for porcelain stoneware
- Ideal for large sizes
- Application thicknesses up to 15 mm
- Tested in accordance with EN 12004, C2 TE S1
- **CE**

Certificate QB n° 151 MC 157



## TECHNICAL FEATURES:

BENFERFLEX C2 is a thixotropic flexible adhesive consisting of high strength cements, graded particle size aggregates, synthetic resins and special additives. It has been formulated and developed for rapid, reliable installation of porcelain tile and ceramic tile on cement based screeds, non-absorbent substrates and onto substrates subject to slight dimensional variation. The high resistance to vertical sliding allows to tile from the top down.

## AREAS OF APPLICATION:

Laying of porcelain, ceramic tiles and water stable natural stones on:

- Interior and exterior wall and floor
- Heavy duty areas
- Public and private swimming pools

## CONTRACT ITEM SPECIFICATIONS:

Floor and wall coverings must be applied with a flexible, one part, cement based fiber reinforced adhesive, classified C2TE S1 in accordance with EN 12004, like BENFERFLEX C2, by Benfer.



TECHNICAL ASSISTANCE



INSURANCE GUARANTEE



TECHNICAL MEETINGS



PROFESSIONAL USE

### SUBSTRATES:

- Concrete
- Cement-based screeds, standard or heated with water system or electric resistance
- Cement-based plaster
- Flexible waterproofing membranes made up of cement and polymers (ACQUASHIELD-2KF)
- Cement based blocks

### INSIDE ONLY:

- Fluid cement-based screeds (prior application of an appropriate primer if demanded), standard or heated with water system or electric resistance
- Fluid anhydrite-based screeds (prior application of an appropriate primer), standard or heated with water system or electric resistance
- Old ceramic tiles (prior application of an appropriate primer)
- Standard or waterproof plasterboard
- Elastomeric waterproofing membranes (ACQUASHIELD-GEL)
- Wooden boards (prior application of an appropriate primer)

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### MAXIMUM SIZES:

- Internal floors with maximum length of longest tile side up to 360 cm.
- External floors with maximum length of longest tile side up to 120 cm.
- Internal walls with maximum length of longest tile side up to 360 cm
- External walls with maximum length of longest tile side up to 90 cm.

See the choice table to verify size limits by tile/substrates characteristics.

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## **METHODS OF USE:**

### **SUBSTRATES PREPARATION:**

The substrates must be solid, free from oil, grease and dust. Any paint-work must be in good condition, washed and degreased. If this is not the case, the paint must be removed. Gypsum or calcium sulphate based or absorbent substrates must be previously treated with BENFERPRIM.

### **MIXTURE PREPARATION:**

Mix BENFERFLEX C2 with 27% of water (powder into water, not the other way around) until you obtain a homogeneous, bright, plastic adhesive. Leave it to rest 5 minutes, and then re-mix rapidly. The adhesive is now ready for use and it must be used within 3 hours.

### **TILING:**

**INTERIOR:** Lay the tiles while exerting a good pressure on the tiles surface, so that contact between tile and adhesive will be at least of 95-100%.

**EXTERIOR:** The contact between tile and adhesive must be 100% so to avoid the eventual rain infiltrations that in case of frost could cause the detachment of the tiles. Therefore, it is suggested to spread also a layer of BENFERFLEX C2 on the back of the tiles.

We suggest to do the same things even inside for:

- Floor tiles largest than 500 cm<sup>2</sup> with water absorption of the tiles  $\geq$  0.5% (e.g. porcelain tiles)
- Floor tiles largest than 1100 cm<sup>2</sup> with all the other types of tiles
- Wall tiles largest than 120 cm<sup>2</sup> with water absorption of the tiles  $\geq$  0.5% (e.g. porcelain tiles)
- Wall tiles largest than 500 cm<sup>2</sup> with all the other types of tiles
- Special applications such as industrial refrigerators, basins, swimming pools, etc.

It is essential to leave a joint of at least 3 mm between each tile, and to ensure that the tiling conforms with the expansion joints of the structure, to be elastically sealed, as well as the joints between walls, and the joints between wall and floor.

In any case expansion joints and perimeter joints must be carried out every about 20 m<sup>2</sup> .

### **FULL SERVICE:**

At 23°C and with 50% relative humidity, the open time of the mix is approximately 20 minutes. In unfavourable conditions, these times may be significantly reduced. You are therefore advised to spread the adhesive a little at a time and to check frequently that it has not formed a surface film before laying the tile. To improve workability, especially in summer, it is beneficial to exclude draughts. In the first 48 hours after application, the adhesive does not withstand frost. Flooring installed using BENFERFLEX C2 can be walked over cautiously after about 12 hours for grouting, (24 hours for temperatures under 15°C) and full service after 7 days.

**CLEANING:** The cleaning of the coating must be effected by means of a damp cloth or sponge when the adhesive has already started to set and it can be done using greater quantity of water only after 48 hours from tiling.

**PACKAGING:** BENFERFLEX C2 is available in 5, 20 or 25 kg poly-lined bags, in pallet of 1.500, 1.125, 1.120, 1.080 or 400 kg.

**STORAGE:** In the original closed package in a cool dry place.

**SHELF LIFE:** 12 months from the date printed on the packaging.

**CONSUMPTION:** The consumption changes according to planarity of the support, to the used trowel and to the laying system (simple or double gluing).

Support	Tiled surface	Laying System	Trowel type mm	Consumption kg/m <sup>2</sup>
Int. floor.	S < 1100	simple gluing	8/10	4/5
	1100 < S < 3600	double gluing	10 / 15	6/7
	3600 < S < 10000	double gluing	20	8
Ext. floor	400 < S < 1100	double gluing	8	5
	1100 < S < 3600	double gluing	10/15/20	6/7/8
Int. wall	S < 400	simple gluing	6	3,5
	400 < S < 2000	double gluing	8/10	5/6
	2000 < S < 3600	double gluing	10	6
Ext. wall	S < 400	double gluing	6	4,5
	400 < S < 2000	double gluing	8/10	5/6
	2000 < S < 3600	double gluing	10	6

#### PRODUCT TECHNICAL DATA

Classification EN 12004:	C2TES1
Basis:	Cement, aggregates, additives
Colour:	White and grey
Apparent mass volume:	1,25 kg/dm <sup>3</sup>
Maximum grain size:	0,5 mm
Storage and Duration:	12 months in the original closed package in a cool dry place
Danger of toxicity:	No. The product may cause irritation to the eyes and skin due to presence of cement
Inflammable:	No
Mixture ratio:	27%, 6,75 lt water/25 kg bag; 1,3 lt water/5 kg bag
Mixture consistency:	Creamy
Density of paste:	1,65 kg/dm <sup>3</sup>
Application temperature:	From + 5°C to + 35°C
Pot Life:	3 hours*
Open time:	30 minutes*
Vertical sliding to EN 1308:	< 0,5 mm
Max thickness:	15 mm
Foot traffic after:	12 hours*
Grouting:	12 hours*
Full service:	7 days*
Final hardening:	28 days*
<b>Final performance:</b>	
Adhesion (after 28 days):	> 1,0 N/mm <sup>2</sup>
Adhesion after warming:	> 1,0 N/mm <sup>2</sup>
Adhesion after water immersion:	> 1,0 N/mm <sup>2</sup>
Adhesion after frost-thaw cycles:	> 1,0 N/mm <sup>2</sup>
Deformability to EN 12004:	2,6 mm
Temperature resistance by:	30°C to +90°C ,

\* at 23°C and 50% relative humidity

PLEASE NOTE: The information given in this chart is based on our best experience and indicative only. It must in any event be verified by the end user, who assumes all liabilities deriving from utilization of the product.