

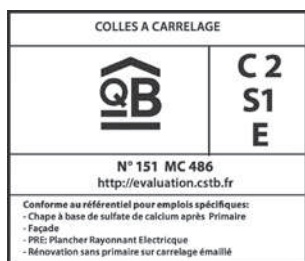


# Benfer ECOFlex

Fiber reinforced flexible adhesive

- High flexibility
- 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, C2TES1
- No vertical sliding
- **CE**

Certificate QB n° 151 MC 486



## TECHNICAL FEATURES:

Benfer ECOFlex is a thixotropic 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, suitable to be over spread with spatula in thickness up to 15 mm, classified C2TES1 in accordance with EN 12004, like Benfer ECOFlex, by Benfer.



TECHNICAL ASSISTANCE



INSURANCE GUARANTEE



TECHNICAL MEETINGS



PROFESSIONAL USE

#### SUITABLE 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)
- Gypsum boards (prior application of an appropriate primer)

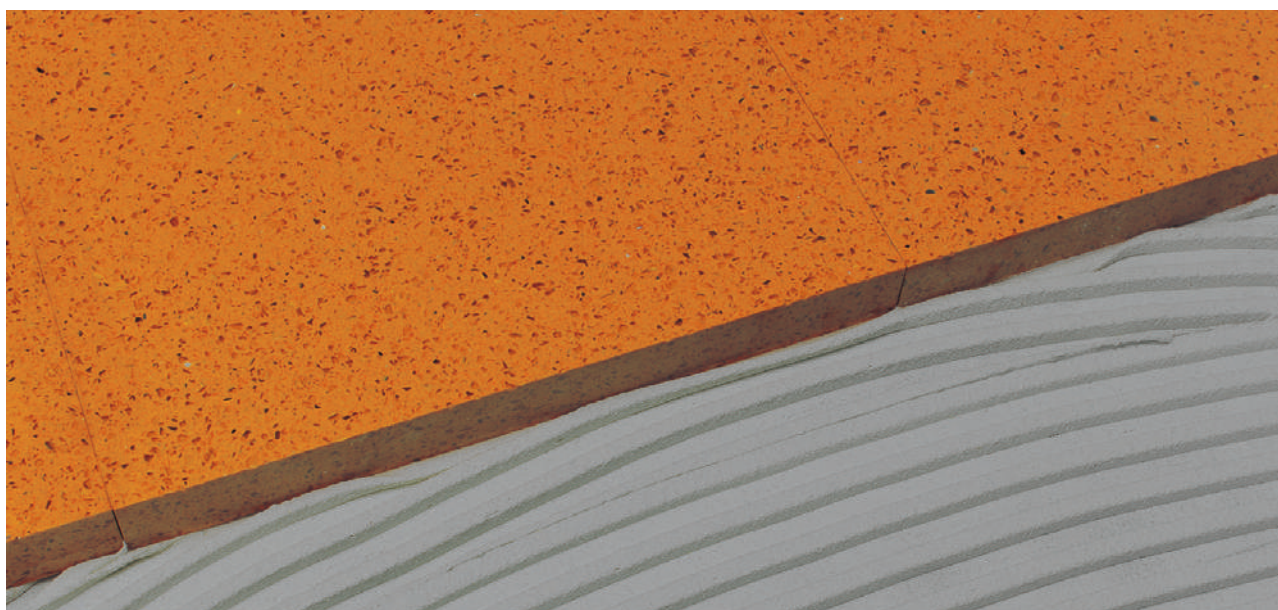
---

#### 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 coverings with maximum length of longest tile side up to 360 cm
- External walls coverings with maximum length of longest tile side up to 90 cm

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

---



**METHOD 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 carefully removed.

Gypsum, calcium sulphate based substrates or particularly absorbent substrates must be previously treated with BENFERPRIM. Do not use on plastics or metals. Absorbent substrates must be treated with BENFERPRIM.

**MIXTURE PREPARATION:**

Mix Benfer ECOFlex with 27% of water (powder in water and not vice-versa) 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 Benfer ECOFlex on the back of the tiles.

We suggest to do the same things even in interiors for:

- Floor tiles larger than 500 cm<sup>2</sup> with water absorption of the tiles  $\leq 0.5\%$  (e.g. porcelain tiles)
- Floor tiles larger than 1100 cm<sup>2</sup> with all the other types of tiles
- Wall tiles larger than 120 cm<sup>2</sup> with water absorption of the tiles  $\leq 0.5\%$  (e.g. porcelain tiles)
- Wall tiles larger 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 about every 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. Under 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 useful to exclude draughts. In the first 48 hours after application, the adhesive does not withstand frost. Flooring installed using Benfer ECOFlex can be walked over cautiously after about 12 hours for grouting (24 hours for temperatures under 15°C). Fully loadable after 7 days.

**CLEANING:** Tiling should be cleaned with a damp cloth or sponge when the adhesive has already started to set. Allow to stand 48 hours after application of tiling before cleaning with larger quantities of water.

**PACKAGING:** Benfer ECOFlex is available in 25 kg poly-lined bags, on Europallet of 1.200 kg.

**STORAGE/ SHELF LIFE:** 12 months, in the original unopened packaging in a dry and cool place.

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

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

#### PRODUCT TECHNICAL DATA

Classification EN 12004:	C2TES1
Basis:	Cement, aggregates, additives
Colour:	White, 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
Mixture consistency:	Creamy
Density of paste:	1,65 kg/dm <sup>3</sup>
Application temperature:	From + 5°C to + 35°C
Pot Life:	About 3 hours*
Open time:	30 minutes*
Vertical sliding to EN 1308:	< 0,5 mm
Maximum thickness application:	15 mm
Foot traffic after:	12 hours*
Grouting:	12 hours*
Full service:	7 days*
Final hardening:	28 days*
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 according EN 12004:	2,6 mm
Temperature resistance:	From -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.