

## HFE-tec® ECC 1000 FLOWABLE

### High Fracture Energy Technologies ECC – Engineered Cementitious Composites

**Description** HFE-tec® ECC 1000 FLOWABLE is a special cement-based formulation containing FIB-energy® fibres with a high elasticity modulus. The deformation capacity is about 400 times higher than a standard cementbased composition. Once mixed with water, the product is pourable and therefor suitable to be poured or pumped in formwork or applied horizontally.

**Components** HFE-tec® ECC 1000 FLOWABLE contains 3 component :

- A. Bag of compound in powder form of 25 Kg
- B. Can of liquid component of 6,2 Kg
- C. Fibre dosage of 0,5 Kg

**Total 31,7 Kg**

**Fields of use**

- HFE-tec® 1000 FLOWABLE can be used for applications where high deformations need to be absorbed without collapsing.
- Repairs on high structures that need to absorb high solicitations without cracking or collapsing.
- Continuous floorings without joints
- Ductile joints

**Method of application**

Surfaces should be clean, sound, dry and free of contamination, powder, loose parts, oils or greases; surface needs to be sufficiently rough.

Environmental temperature  $\geq 5^{\circ}\text{C}$ .

Use mixer with vertical axes or (for single bags in buckets) high efficiency drill mounted mixer.

Mix components A (powder) with B (liquid) for more than 3 minutes until a homogeneous and pourable mixture is obtained (the initial product appears puttylike and will reach liquid consistency after long mixing).

The fibres (C component) need to be added slowly during the mixing process in order to obtain a complete dispersion and perfect homogeneous paste.

Application by pouring or pumping, in formwork or horizontally.

**Characteristics (typical values)**

- Workability time: 40 min.
- Time for initial setting: 50 min.
- Density: 1800  $\div$  1900 gr/lt
- Compressive strength 7 days: 20 MPa
- Flexural strength 7 days: 12 MPa
- Compressive strength 28 days: 37 MPa
- Flexural strength 28 days: 19 MPa
- Modulus of elasticity - static 28 days: 10 GPa
- Fracture energy (ductility) at 28 days:  $\sim$  100.000 N/m

## Remarks

INFORMATION ACCORDING TO 2003/53/CE.

**Stocking:** 12 months in original closed packaging, in dry and protected area, in temperature range between +5°C and +35°C.

Do not use the content of opened bags if you remark lumping of the powder.

FIB-energy® fibres do not have a limited durability.

Kindly follow safety indications applicable for any cement based product. Read carefully the material safety indications on the packaging, or consult the relevant Material Safety Datasheet of this product.

The above data are based on our actual and most experienced practical and laboratory knowledge and the results are collected from application of the product in different situations. Tecnochem Italiana does not assume any responsibility regarding inadequate or negative performance as a result of improper use of the product or for defects deriving from factors or elements other than the quality of the product including improper storage. The technical characteristics and performance mentioned in this datasheet are updated periodically. The revision dates and number of revision of the datasheets are listed in the table below. Eventual variations are traceable on our website [www.tecnochem.it](http://www.tecnochem.it) where the most updated datasheets can be retrieved.

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