

# i.design

## EFFIX CREA

### Field of application

- i.design EFFIX CREA is a very high performance mortar to be used for manufacturing non-structural elements and decorative objects.

### Mortar composition

- i.design EFFIX CREA is a ready-to-use mortar consisting of cement pre-blended with sand, fibres and admixtures as needed for its manufacture.
- The fibres used are alkali-resistant glass fibres.

### Preparation and use

- About 12 litres of mortar are obtained by mixing a 25-kg bag of i.design EFFIX CREA mixed with 2.75 litres of water.
- The use of a high-energy mixer or an intensive mixer is recommended for a good dispersion of components.
- Instructions for preparing the mix with either a mortar or concrete mixer are given as follows (\*) (\*\*):
  1. Pour the necessary number of bags into the mixer
  2. Mix for 30 seconds
  3. Add 2.75 litres of water per bag used
  4. Mix for two minutes (calculated from mix fluidization)
  5. Stop the mixer and scrap its walls
  6. Mix for another 2 minutes

(\*) Depending on the type of mixer used, the optimum volume of an i.design EFFIX CREA mix is equal to half the maximum capacity of the mixer

(\*\*) Duration of the i.design EFFIX CREA production process depends on the type of mixer used. With a traditional concrete mixer, adjustment of the blade depth may be necessary to obtain a smooth mix

- Pour the mix immediately into the mould or the formwork. Continue pouring at the same point without interruption to avoid entraining air bubbles
- i.design EFFIX CREA has been designed for the production of non-structural elements, such as decorative objects, interior furnishings and other manufactures possessing complex shapes. For example, it can be used for the production of kitchen & bathroom countertops, working surfaces, bathroom furnishings, tables, seats, sinks, tiles, benches, etc.
- Its formulation based on very fine raw materials allows obtaining perfectly smooth and homogeneous surfaces in addition to excellent reproduction of the texture of moulds used.
- i.design EFFIX CREA can be thermally treated after setting, which permits accelerating the material's curing process. The treatment consists in gradually heating the manufactured elements up to 60°-90°C in 48-72 hours. As it contributes to strength development and durability enhancement, this treatment provides great dimensional stability to i.design EFFIX CREA.

### Physical properties

Mixing with water yields a very flowable ivory mortar.

|                            |                         |
|----------------------------|-------------------------|
| Fresh mortar density       | 2.340 kg/m <sup>3</sup> |
| Particle size distribution | 0 – 500 µm              |

### Mechanical properties

(According to the placing conditions envisaged by the project).  
Average values based on 4x4x16 cm prisms

|            | Compressive strength at 20°C | Flexural strength at 20°C |
|------------|------------------------------|---------------------------|
| At 1 day   | ≥ 60 MPa                     | ≥ 6 MPa                   |
| At 7 days  | ≥ 90 MPa                     | ≥ 7 MPa                   |
| At 28 days | ≥ 100 MPa                    | ≥ 9 MPa                   |



## Precautions

- Work at an ambient temperature between 5° C and 25° C. Ambient temperature can actually affect application time as follows:
  - about 5°C: < 90 minutes
  - about 20°C: < 45 minutes
  - about 25°C: < 5 minutes
- In hot weather, store bags at a temperature below the ambient air and mix cold water to extend workability time.
- Ensure that all mould/formwork joints are properly sealed to prevent leakage; in case they are not, use silicone joints to fill leaks, if any.
- All surfaces in contact with i.design EFFIX CREA should be clean and coated with a thin layer of high-grade formwork/mould release oil. The use of clean, proper brushes or clothes is absolutely necessary for this step.
- Provide effective protection against desiccation (drying-out), especially when manufacturing thin and long elements (i.e. those featuring a significant exposed surface/volume ratio). The use of wet non-woven fabrics and plastic sheets or the even distribution of an anti-evaporation agent has been shown to provide an adequate solution to the problem.
- Protect from frost, wind and direct sun during setting and hardening.
- Removal of formwork/mould can be performed after 18-24 hours.
- After demoulding, elements must be kept wet or be immersed in water at 20°C for at least 7 days. During early curing, avoid storage in hot, dry and windy weather.
- The use of a suitable surface protection product is highly advisable.

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