

Characteristics of product

Forcem is a dry powder mix containing special types of cements, fillers, and chemical admixtures, including the additives **ASA** and **CRYX**.

Use of product

The levelling flowable quick screed **Forcem** is intended for the preparation of a levelling layer of concrete floors, where excellent flatness and adhesion to the base concrete is required. **Forcem** can be applied to seasoned bases, and because of the rapid loss of moisture and compatibility of composition, final layers can be applied on it with minimal technological breaks.

Properties of product

- The dry mixture directly contains the special additive **ASA** (Anti-Shrinkage Agent), which significantly reduces the formation of hairline fractures on the surface of the resultant floor, which improves the mechanical properties of the material. In addition, it makes laying less difficult.
- The additive **CRYX** creates a so-called crystallisation effect, which bonds the mixing water into the crystal structure of the material being formed, which prevents it leaking into space, reduces the setting time and significantly reduces the formation of microcracks.
- Thanks to the **SILICA EFFECT**, through the use of very fine round particles in the dry element a lower porosity is achieved and thus lower absorbability, greater frost resistance and corrosion resistance, also an increase in physical-mechanical properties (in compression, flexural tensile strength and abrasion resistance) and greater compactness.
- CRACK STOP** treatment. The product contains highly resistant zirconic fibres ensuring three-dimensional (omnidirectional) reinforcement of the material during its maturing and subsequently helps improve resilience to high local burden.

Advantages of product

- High fluidity, attainment of excellent flatness in thickness 10–50 mm.
- High level of adhesion to base concrete.
- High level of productivity and simplicity of laying.
- Rapid loss of moisture, minimal volume changes, minimal technological breaks.

Storage

6 months from the date of production in intact sealed original packaging. Must be protected from moisture and frost.

Statement of Properties

The properties of the **Forcem** product are in accordance with the set of declared properties listed in the declaration of properties number ED 324 according to EN 13813:2002. The declaration of properties is in accordance with Regulation (EU) No. 305/2011.

Packaging

25 kg paper sack with polyethylene lining.

Application procedure

Application can be performed on seasoned, mechanically cohesive and all contaminations free concrete surfaces. Concrete base must have sufficient pressure strength (min. 25 N/mm²) and minimum tensile strength 1,5 N/mm². Before the application of the quick screed, it is necessary to fix holes and cracks using the fillers **Fortegrout 1210** or **1220**. Select the filler depending on the depth of crack or hole. The basecoat **Fortecoat 1410** diluted with water in the ratio 1:3 is applied to a dry and cleaned base using a roller or brush. For surfaces with average porosity apply a coat 1:3. If a shiny surface film sealing the concrete base is not formed, it is necessary to repeat the basecoat. The actual hand mixing of the mixture is performed in plastic containers, into which the relevant amount of water given on the **Forcem** product package is measured, and then the mix is tipped in gradually and homogenised using a low-rev mixer. The material is mixed for 2 minutes, and after being left to stand for 1 minute it is mixed for another minute. The resultant mixture must display a smooth, homogenous consistency (without lumps or deposits). The **Forcem** material is poured evenly onto the concrete base and is spread using a scratcher trowel to gain the necessary thickness. Immediately after the end of application it is necessary to clean and wash the used tools and protective items thoroughly.

Cleaning and maintenance

The cleaning and maintenance procedures constitute a part of the document Instructions for Cleaning and Maintaining the Product **Forcem**.

Warning

- Do not use on outdoor surface.
- Do not apply beyond the scope of the permitted application thicknesses.
- It is necessary to prevent draughts, direct sunlight and any other influences causing premature drying of the surface after laying.
- The addition of bonding agents or other additives or the sieving of the mixture is not permitted.
- Laying is only possible at a base temperature of +5 °C to +25 °C and environmental temperature of +10 °C to +25 °C.
- The water for mixing must comply with ČSN EN 1008 or use drinking water.
- Liquidation of contaminated packaging - dispose as "other waste".
- Before application, please check on the pages www.fortemix.com whether you have up-to-date technical documentation.

Health and safety

Forcem contains cement. During work it is necessary to use protective gear (clothing, gloves, glasses). There is more data on the Safety Sheet.

Technical parameters

Product type	1310	1311
Reinforcement	–	zirconic fibres (Crack Stop)
Compression strength after 28 days (MPa)	min. 35	min. 35
Flexural tensile strength after 28 days (MPa)	min. 7	min. 7
Amount of mixing water for 25 kg (l)	3.5–4	3.5–4
Thickness of layer (mm)	10–50	10–50
Consumption with thickness of 1 mm (kg/m ²)	1.8	1.8
Workability of mixture at 20 °C (min.)	min. 30	min. 30
Possible to walk on at 20 °C (hrs.)	after 2–4	after 2–4
Full load/application of further layer at 20 °C (day)	after 7	after 7
Colour	light grey	

Fortemix company is not liable for damages resulting from failure to comply with instructions and recommendations of manufacturer.

IMPORTANT: The information contained in this document is valid as of 07 December 2023 and is subject to change without further notice. As technical developments continue, it is up to our customers to check the validity of this document before installing the floor.