

FAST-SETTING MORTAR FOR REPAIRING ROADS AND AIRFIELDS

PRODUCT DESCRIPTION

CEMPAC® 540F is a fast-setting, fibre-reinforced repair mortar based on high-quality aluminium cement, aggregates and polymers. The higher the temperature, the faster the setting time. The hard aggregate makes this mortar completely wear-resistant and resistant against extra heavy loading. CEMPAC® 540F mortar is easy to apply, has very high compressive strength and low shrinkage.

APPLICATIONS

- Quick repair of roads, airfields,... when it is important that extra heavy loading is possible after a few hours
- Layer thickness from 15 to max. 50 mm possible in one operation



TECHNICAL DATA

Water content 10%. 50% RH at a temperature of 20°C during hardening process

Flexural strength	≥ 10 N/mm ² after 28 days
Compressive strength	≥ 50 N/mm ² after 7 days
Adhesion to underfloor	≥ 3 N/mm ²
Volatile organic compound value	free of ammonia and formaldehyde
Free shrinkage	< 0.8‰ (measured at 50% RH, after 28 days)
pH value	approximately 11,5
Fluidity	not fluid
Resistance of the material	Resistant against freezing/thawing cycles and chemical antifreezes (tested according to ČSN (Czech Technical Standard) 73 1326/Z1: 2003, method C)
Dry powder density	approximately 1,7 g/cm ³
Wet volume weight	> 2,3 – 2,4 g/cm ³
Water stability	water-stable (expansion under water < free shrinkage)

TECHNICAL INFORMATION

Water addition	10% (2,5 litres/25 kg bag)
Material use	around 1,75 kg per mm thickness/m ²
Minimum substrate temperature	+ 6 °C
Open time	10 – 25 minutes, depending on the ambient temperature
Hardening time	1 – 2 hours before light traffic, depending on the temperature 3 – 24 hours before heavy traffic, depending on the temperature
Storage	Six months in dry conditions

SUBSTRATE PREPARATION

CEMPAC® 540F must be applied onto a well prepared, hard, solid surface, free of contamination. Dust, cement residues, greases, or other soft materials (such as asphalt) must be removed. Ways of doing this include shot-blasting, sand-blasting or scarification. Concrete contaminated by oil or grease first must be treated with flame gunning and/or an appropriate degreasing agent. In order to optimize the adhesion, an adhesive layer of CEMPRIME AC must be applied to the substrate or it must be at least slightly moistened. As soon as the CEMPRIME AC becomes dust dry, the CEMPAC® 540F can be applied.

MIXING

CEMPAC® 540F can be mixed with a concrete mixer, just as normal dry concrete. Use some potable water having a max. temperature of 20°C in a proportion of 10% (2,5 litres/25 kg bag) for mixing. Once the material is mixed, it must be used within 15 minutes. When the material begins to harden, test it, then do not mix it again, and do not add any water.

PERFORMANCE

CEMPAC® 540F is used just like a standard concrete. The flow of the material is good so that a smooth surface can be obtained with a little work with a trowel. The recommended thickness is 15 – 30 mm, but a thickness of up to a max. 50 mm can be applied in one operation. If heavy loading is expected, then make the layers no thinner than 20 mm. For use on a slope, less water can be added. Depending on the temperature during hardening, there can be heavy traffic over the renovated floor after 3 to 24 hours.

If there are high outside temperatures, the processing time is 15 minutes at most. It is important not to mix too large a volume, so that there is sufficient time to apply the material before hardening begins. CEMPAC® 540F contains a small but important amount of polymers that increase the adhesion to the substrate. Semi-hardened material can be completely shaped or cut so that the necessary applications can be performed without problems. Hardened material is particularly hard and very difficult to cut. Do not work at temperatures below + 5°C.

CLEANING

All tools must be cleaned immediately with water.

HEALTH AND SAFETY

Contains cement. Wet cement is corrosive. Protect your eyes and avoid prolonged contact with the skin. Keep out of reach of children. For further information, consult the CEMPAC® 540F safety sheet.



Transport: not a classified product.

IN GENERAL

The general information provided in this technical description, application advice, and other recommendations are based on research and experience. Users themselves must determine whether the products are suited for their specific application. The specified properties refer to average values, obtained at 20°C and 50% RH and prepared according to the current state of the art. Written and oral recommendations in accordance with our general delivery terms are entirely free of obligation.

These technical descriptions supersede all previous ones.

Please take account of different local conditions, such as ventilation, floor temperature, air humidity,... High air humidity and low temperatures delay the bonding and hardening; high temperatures accelerate them.

Consult our website www.cemart.eu in order to download the most recent version of the technical information sheet.