

MAPEFAST C

Chloride-based accelerating admixture for cementitious mortar and concrete



DESCRIPTION OF PRODUCT

Mapefast C is a chloride-based, liquid setting-accelerator admixture.

WHERE TO USE

- Casting concrete without reinforcement during cold weather.
- Mixing cementitious mortar during the winter time.
- Production of pre-cast elements without reinforcement, with a reduction in handling time and the time required to remove formwork, including vibro-compressed concrete (beads, blocks, etc.).

TECHNICAL CHARACTERISTICS

Mapefast C is a chloride-based admixture made according to a formula developed in MAPEI's own Research & Development laboratories.

When added to the mix at the recommended dosage, **Mapefast C** improves the hydration reaction of the cement, accelerating the normal setting times.

The following improvements are achieved using **Mapefast C**:

- lower setting times, including at low temperatures, compared with mixes without admixtures;
- easier, quicker removal of formwork;
- elimination of problems caused by freezing of the concrete.

RECOMMENDATIONS

- Do not use **Mapefast C** for concrete and mortar with steel reinforcement.
- Do not add **Mapefast C** to the mixing water.
- Do not add more than the recommended dose of **Mapefast C**: setting may be accelerated.
- **Mapefast C** does not increase the strength of concrete which hardens during freeze-thaw cycles. To make XF exposure-class concrete according to EN 206-1 standards, add air entraining agents from the **Mapeair AE** range.

APPLICATION PROCEDURE

Preparing the mix

Add **Mapefast C** at a rate of 0.75-1.5 l per 100 kg of cement together with all the other components: cement, aggregates and water.

Continue mixing for a few minutes until a homogenous mix is obtained.

GUIDELINES WHEN PREPARING CEMENTITIOUS MIXES

Even if **Mapefast C** is added to the mix, the usual guidelines when preparing concrete during cold periods must be followed:

- the components which make up the mix (cement, sand and gravel) must be heated up to a temperature higher than +5°C;
- use cement which has been stored at a temperature higher than +5°C;
- cast the mix in the morning where possible, to exploit the normal increase in temperature which takes place during the daytime;
- do not cast at a temperature lower than -10°C if a drop in temperature is forecast in the hours immediately after casting;
- do not use slow-setting cement: where possible, use CEM I 42.5R at a dose higher than 300 kg/m³;
- use the lowest water-cement ratio possible;
- protect the cast material, especially if it has a thin section, using jute or paper bags to help keep hydration heat inside the material.

COMPATIBILITY WITH OTHER PRODUCTS

- **Mapefast C** may be used in conjunction with superplasticizers from the **Chronos**, **Dynamon** and **Mapefluid** ranges.
- **Mapefast C** is compatible with other products used in the production of special concrete, and in particular with:
- **Viscostar 3K** or **Viscofluid SCC/10** viscosity regulator admixtures, for preparing self-compacting concrete;
- air-entraining agents from the **Mapeair AE** range used in the production of concrete resistant to freeze/thaw cycles;
- limestone and other filler materials, used for mixing self-compacting concrete and any type of concrete which requires such filler materials;
- form-release agents from the **Mapeform Eco** and **DMA** range, used for stripping formwork from concrete;
- **Mapecure** range curing compounds, for protection against rapid evaporation of the water used for blending the mix in concrete structures without form boxes (e.g. floors).

DOSAGE

Dosage in volume:

from 0.75 to 1.5 l/100 kg cement, according to the temperature and mechanical strength required.

Different dosages from those suggested must be previously tested through concrete trials, in addition to consulting MAPEI Technical Services Department

PACKAGING

Mapefast C is available in 1000 l tanks and in 7, 13 and 30 kg tins.

STORAGE

Mapefast C can be stored for 24 months in sealed and dry containers.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefast C is not considered dangerous according to the current regulation regarding the classification of mixtures. It is recommended to wear gloves and goggles and to take the usual precautions for handling of chemicals. For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Consistency:	liquid
Colour:	red
Density according to ISO 758 (g/cm ³):	1.35 ± 0.03 at +20°C
Main action:	mechanical strength accelerator after short curing cycles and at temperatures lower than +10°C

Classification according to EN 934-2:	hardening accelerator admixture, table 7
Classification according to ASTM C494:	Type C
Chlorides soluble in water according to EN 480-10 (%):	< 25
Alkali content (Na ₂ O equivalent) according to EN 480-12 (%):	< 1.0

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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