

Mapefast CF/L (former Antifreeze S Liquid)

Chloride-free accelerating admixture for concrete and mortar

DESCRIPTION OF PRODUCT

Mapefast CF/L is a high-efficiency, chloride-free, liquid hardening-accelerator admixture.

WHERE TO USE

- Cast concrete, including reinforced concrete, during the winter.
- Mixing cementitious mortar during the winter.
- Flying formwork.
- Production of prefabricated reinforced concrete units and field concrete, with a reduction in handling time and the time required to remove formwork, including vibro-compressed concrete (pipes, floors, beads, blocks, etc.).

TECHNICAL CHARACTERISTICS

Mapefast CF/L is a hardening accelerator-based admixture made according to a formula developed in MAPEI's own research laboratories.

When added to the mix at the recommended dosage, **Mapefast CF/L** improves the hydration reaction of the cement, with a minimum influence on normal setting times.

The following improvements are achieved using **Mapefast CF/L**:

- considerable increase of initial mechanical strength after 24 hours compared with mixes without the admixture, even at low temperatures;
- no loss in final mechanical strength;

- easier, quicker removal of formwork;
- elimination of problems caused by freezing of the concrete.

RECOMMENDATIONS

- Do not add **Mapefast CF/L** to the mixing water.
- Do not add more than the recommended dose of **Mapefast CF/L**: setting may be accelerated.
- **Mapefast CF/L** does not increase the strength of concrete which hardens during freeze-thaw cycles. To make XF exposure-class concrete according to EN 11104 standards, add air entraining agents from the **Mapeair AE** line.

HOW TO USE

Preparation of the mix

Add **Mapefast CF/L** 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 CF/L** 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.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Appearance:	liquid
Colour:	light yellow
Density according to ISO 758 (g/cm ³):	1.30 ± 0.03 at +20°C
Solids content according to EN 480-8 (%):	44 ± 2.2
Specific 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
Chlorides soluble in water according to EN 480-10 (%):	< 0.1 (absent according to EN 934-2)
Alkali content (Na ₂ O equivalent) according to EN 480-12 (%):	< 2.0

- 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 CF/L** may be used in conjunction with super-plasticisers from the **Chronos**, **Dynamon** and **Mapefluid** ranges.
- Mapefast CF/L** is compatible with other products used in the production of special concrete, and in particular with:
- **Viscostar 3K** and **Viscofluid SCC/10** viscosity regulator admixes, for preparing self-compacting concrete;
 - **Mapelast SF** micro-silica-based powder, used in the production of concrete with “top quality” properties of mechanical strength, waterproofing and durability;
 - **Expancrete** expanding agent used in the production of shrinkage compensated 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** range or **DMA 1000**, used for stripping formwork from concrete;
 - **Mapecure E**, **Mapecure S** and **Mapecure CA** curing compounds, for protection against rapid evaporation of the water used for blending the mix in concrete structures without form boxes (e.g. floors).

CONSUMPTION

Dosage in volume:

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

PACKAGING

Mapefast CF/L is available in bulk, 200 l drums, 1000 l tanks and in 6, 12 and 30 kg tins.

STORAGE

Mapefast CF/L can be stored for 24 months in sealed containers and protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefast CF/L is not considered a dangerous substance according to current regulations regarding the classification of mixtures. However, the use of protective gloves and goggles and the application of the usual precautions taken when handling chemical products are recommended.

For further and complete information about a safety use of our product please refer to our latest version of the Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

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

**All relevant references
for the product are available
upon request and from
www.mapei.com**

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6366-1-2013