

## CONCRETE AND MORTAR FROST PROTECTION FS 10

- > chloride-free
- > liquid
- > can be processed down to -9 °C



### Product description

Chloride-free, liquid frost protection agent for concrete and mortar. Through the addition, the hydration heat of concrete or mortar is increased and therefore the required minimum compressive strength of 5 N/mm<sup>2</sup> for the freezing resistance reached earlier.

Indoors and outdoors for reinforced and prestressed concrete as well as masonry mortar (lime cement or cement mortar). When in compliance with standardised protective measures, enables concreting and masonry work down to a temperature of -9 °C. For all areas of the ready-mixed concrete and finished part industry.

#### Delivery format:

Container	Outer packaging	Pallet
5 KG / KKA		96
1 KG / KFL	6	378

#### Storage:

Can be stored frost-free, cool and dry on wooden shelves in unopened original container: 365 days

### Processing

#### Mixing:

Mixing and consumption table for lime cement mortar:

Temperature in °C: -3 -6 -9

Diluted with water: 1 : 15 1 : 10 1 : 6

Mixture in kg: 15-18 22-30 37-45

Mixing and consumption table for reinforced and prestressed concrete

Temperature in °C: -3 -6 -9

Diluted with water: 1 : 15 1 : 10 1 : 6

Mixture in kg: 10-12 15-20 25-30

## Processing:

It must be ensured that the temperature of the fresh concrete or mortar is not below +5 °C. The frost protection does not suspend the recognised rules for concreting at low temperatures and is only an additional aid for concreting in winter. The usual protective measures at sub-zero temperatures, such as heating the mixing water, defrosting frozen additives, use of cements of high quality classes, etc. must be kept.

## Post-treatment:

The surface of the concrete, especially for thinner concrete thicknesses, must be covered immediately after production.

## Technical data

Density	approx. 1.2 g/cm <sup>3</sup>
Viscosity	approx. 11 s (DIN 4)
Consumption	approx. 1% of the cement weight (approx. 3 - 4 kg/m <sup>3</sup> concrete)
Processing temperature	down to -9 °C
Temperature of the fresh concrete or mortar	above +5 °C

## Substrate

### Suitable substrates:

The substrate meets the requirements of the OVBB Guideline – Conservation and Rehabilitation of Concrete and Reinforced Concrete Structures. Furthermore, the substrate must be load-bearing and free of similar and dissimilar substances as well as substances that have a separating effect, corrosive media, such as chlorides, and must be pre-wetted for at least 12 hours before restoration until capillary saturation. Adhesive tensile strength at least 1.5 N/mm<sup>2</sup>. Compressive strength at least 25 N/mm<sup>2</sup>.

## Product and processing instructions

### Material information:

- If processing outside the ideal temperature and/or humidity range the material properties could change markedly.
- Bring the materials to the proper temperature before processing!
- In order to maintain the product properties, do not add any foreign materials!
- Water dosing quantities or dilution information must be strictly adhered to!
- Check tinted products for colour accuracy before application!
- Colour consistency can only be guaranteed within the same batch.
- The colour formation is significantly impacted by the environmental conditions.

### Environmental information:

- Do not process at temperatures below +5 °C!
- The ideal temperature range for the material, substrate and air is + 15 °C to + 25 °C.
- The ideal relative humidity range is 40% to 60%.
- Increased air humidity and/or lower temperatures may prolong the drying, setting and hardening time, while lower air humidity and/or higher temperatures will speed it up.
- Ensure adequate ventilation during the drying, reaction and hardening phase; avoid draughts!
- Protect against direct sunlight, wind and weather!
- Protect adjacent components!

### Tips:

- We recommend using a test surface first or a small area for initial, small-scale testing.
- Please heed the product data sheets of all MUREXIN products used in the process.
- Keep a genuine original container of the respective batch for later repair work.

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The information provided reflects average values that were obtained under laboratory conditions. Due to the use of natural raw materials, the indicated values of individual deliveries may vary slightly without impacting the product suitability.

### Safety instructions

Please refer to safety data sheet for product-specific information with regard to composition, handling, cleaning, corresponding actions and disposal.

Limiting and monitoring exposure

Personal protective equipment:

General protection and hygiene measures:

- Common safety measures for handling chemicals are to be observed.
- Keep away from foodstuffs, beverages and feedstuffs.
- Take off contaminated, impregnated clothing immediately.
- Wash your hands before taking breaks and when finishing work.
- Avoid contact with the eyes and skin.

Breathing protection: not required.

Hand protection:

- Protective gloves.
- The glove material must be impermeable and resistant to the product/substance/preparation.

Glove material

- Nitrile rubber

- The selection of a suitable glove depends not only on the material, but also on other quality properties, which may vary from manufacturer to manufacturer.

Penetration time of the glove material

- The precise penetration time is to be found out from the protective glove manufacturer and complied with.

Eye protection: tightly sealed protective goggles.

Body protection: protective clothing.

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Please observe the current, technical, national and European standards, guidelines and data sheets regarding materials, substrates and the subsequent construction. Please contact us if you have any reservations or doubt. This version is rendered invalid if a new version is released. The most recent data sheets, safety data sheets and the terms and conditions are available online at [www.murexin.com](http://www.murexin.com).