

**Concrete and Mortar Admixtures****ANTIFREEZE 100**

Concrete and Mortar Admixture for Anti-Frost

**DESCRIPTION**

**Polynaphthalene sulfonate** and **nitrate salt based** concrete and mortar admixture which increases the fluidity and accelerates the setting of the concrete in weather conditions when the risk of frost is high and gives **resistance to the concrete against frost**. Does not contain chlorine.

**APPLICATION AREAS**

- Protection the concrete against frost throughout the day in cold weather
- Applications where early high resistance is required in cold weather
- Protection of cement based indoor and outdoor plasters against frost
- Sudden temperature decrease
- When the molds are needed to be removed early
- Floor screeds
- Production of all kinds of concrete, with or without reinforcement
- Pouring of precast and prefabricated concrete
- Production of ready-mix concrete with or without pumps.

**TECHNICAL PROPERTIES**

<b>Appearance</b>	Brown liquid
<b>Liquid Density</b>	1.15 ± 0.05 kg/L (20°C)
<b>pH</b>	6 – 8 (20°C)
<b>Chlorine Content</b>	< 0.1%
<b>Freezing Point</b>	-10°C

**ADVANTAGES**

- Protects the concrete from frost when pouring the concrete in cold weather and gives it early resistance
- Shortens the initial and final setting time
- Does not damage the reinforcement as it does not contain chlorine. Not corrosive. Can be used safely in reinforced concrete buildings
- Provides the continuity of the construction work in cold weather, without any need to delay the concrete pouring
- Ensures the homogenous distribution of the cement and sand particles in the concrete and the mortar and provides the hydration on a larger surface.

**CONSUMPTION**

1 – 2.5 kg product is used for 100 kg binder (cement, fly ash, slag etc.). This amount can be increased up to 5 kg in very cold weather.

**APPLICATION****APPLICATION**

- Add, mixing water to the concrete or to the mortar in two stages. In the first stage, add approximately 50% of the mixing water without ANTIFREEZE 100 to the concrete or mortar. In the second step, add ANTIFREEZE 100 in the amount calculated according to the amount of binder into the remaining 50% of the water.
- Mix 1 – 2 minutes in fast speed for homogenous dispersion of ANTIFREEZE 100 in the concrete or mortar.

**CAUTION**

- Use only as an additive in concrete and mortar. Do not use in ready-to-use construction chemicals (repair mortars, thermal insulation board adhesives and plasters, ceramic adhesives, cement-based plaster materials, etc.) instead of water or for frost protection.
- The composition ratios in the concrete or mortar and the amount of additive should be determined as a result of laboratory preliminary tests with the raw materials to be used at the construction site, according to the desired concrete class and properties.
- Adding the additives directly on the dry mix (binder + aggregate) results in unhomogeneous distribution and failure in the mechanical properties of the concrete. Always add the additive to the water.
- In case of using more additives than the recommendation, a change may be observed in the setting times of the mixture.
- Store the products in essential conditions and keep the temperature of the fresh concrete between +5°C and +15°C depending on the ambient temperature and the concrete casting thickness in order for the materials to be used in the concrete or mortar mixture not to be affected by the cold,
- Prevent rapid temperature fall and moisture loss until the concrete reaches a strength of 4 - 5 N/mm<sup>2</sup> and protect it with appropriate curing methods.
- Prefer wooden molds instead of steel molds.
- Shake well before use.
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**PACKAGING**

30 kg plastic jerrycans and 180 kg barrels.

**SHELF LIFE**

Expires in 12 months. Store unopened packages between +5°C and 15°C in a cool and dry environment. Shake well before use. Protect against frost.

**HEALTH AND SAFETY**

As with all chemical products, avoid contact with food products, skin, eyes and mouth during use and storage. During the application, use work clothes, protective gloves and glasses in accordance with the occupational and worker health rules. Consult a doctor if accidentally swallowed. In case of contact with skin, wash with plenty of water. Store out of the reach of children.

The application instructions and technical values given for the products have been obtained in accordance with our tests and experiences in accordance with international standards at 23±2°C temperature and 50±5% relative humidity conditions. These values may vary depending on ambient conditions. High temperatures shorten the times, low temperatures lengthen them. Before starting the application, the user should test whether the product is suitable for the application and purpose. FIXA Yapı Chemicals San. Trade Ltd. Sti. is not responsible. This Technical Data Sheet remains valid until the next revision is published. FIXA reserves the right to change the values specified in this Technical Data Sheet, provided that the new version is published. It is the user's responsibility to check that the document is up-to-date. Please contact our sales department for more information.