

# HIDROZIM FLUID

*Admixture for concreting at low temperatures with plasticizing effect  
In compliance with: EN 934-2 T12*

## FILED OF APLICATION

Concreting in conditions of low ambient temperatures (lower than +5°C). With the application of Hidrozim Fluid, as well as the recommendations for winter concreting, it is possible to apply concrete at low temperature conditions (up to -20°C). Additionally, Hidrozim Fluid enables reduction of water in fresh concrete and achieving higher strength characteristics and allows easier casting of concrete.

## PROPERTIES

- Enables proper hydration of cement at low temperatures;
- Enables early strength development of concrete;
- Enables water reduction up to 20%;
- Reduces the time of concrete setting;
- Continues the construction season throughout the year;

## TECHNICAL FEATURES

PROPERTY	METHOD	DECLARED VALUE
Appearance	Visual	Yellow liquid
Density (at 20°C)	ISO 758	(1.34±0.03) g/cm <sup>3</sup>
pH-value (at 20°C):	ISO 4316	7,0±1
Chlorides content:	EN 480-10	≤0.1%
Alkali content:	EN 480-12	≤1.0%

## DOSAGE AND PERFORMANCE:

Optimal dosage of Hidrozim Fluid is 0,5% to 2,0% from cement quantity in concrete mixture. The dosage depends on the ambient temperature during concreting, the expected temperatures within 24 hours after concreting, the type of concrete element that is concreted and its exposure to atmospheric influences. At temperature up to -10°C, dosing of Hidrozim Fluid from 0.5 to 1.0% is recommended, while dosing of 1 to 2% relative to the mass of cement in the concrete mixture. At temperatures below -10°C (up to -20°C) recommended dosage is (1,0-2.0%) in relation to the mass of the cement in the concrete mix. In addition, the use of Hidrozim Fluid also allows for adequate reduction of water in fresh concrete and improvement of its rheological characteristics, as well as the strength characteristics of hardened concrete. **Recommendations for winter concreting** The temperature of the fresh concrete mixture during the application need to be at least +5°C (in thin sections +10°C). At low temperatures this can be achieved by heating some or all of the components of the concrete mix (water, cement, aggregate). After adding Hidrozim Fluid, it is necessary to mix the concrete for at least 4-5 minutes, and the fresh concrete should be installed as soon as possible.

The surface of the casted concrete should be protected from surface freezing. The time for the release of the formwork should be delayed depending on the temperature, until achieving the required strength of the concrete. In the case of concreting with Hidrozim Fluid at temperatures below -10°C, it is necessary to take special measures for protection and care of concrete elements (heating, use of thermal insulation materials).

**Effects of overdose:** Overdosing of Hidrozim Fluid can cause segregation of fresh concrete, as well as accelerating the process of concrete setting.

## COMPATIBILITY

Hidrozim Fluid is compatible with number of different admixtures from the production program of ADING. Hidrozim Fluid is compatible with all types of Portland cement, including sulphate-resistant concrete types. Hidrozim Fluid is not compatible and should not be used in combination with the admixtures that contains poly-naphthalene sulphonate, such as: Fluiding, Superfluid, Superfluid-M1, Superfluid-M1M and Superfluid-T. Otherwise, the workability of concrete can be lost.

If two or more admixtures are used in the concrete mixture, it is necessary to make preliminary tests. Different admixtures are dosed separately and they are not to be inter-mixed prior to application in the concrete mixture.

## PACKAGING

Plastic bottle: 1,5 kg  
Plastic cans: 7 и 28 kg  
Drums: 280 kg  
Containers: 1300 kg

## STORAGE

In the original packaging at temperature between -18°C and 35°C, protected from direct exposure to sunlight. Shelf life: 12 months.

## CE MARKING

 2032	
ADING AD Skopje, Novoselski pat (ul 1409) br.11 1060 Skopje, North Macedonia 17 GADB001/6 EN 934-2:2009+A1:2012 <b>HIDROZIM FLUID</b> Set accelerating/water reducing/plasticizing admixture for concrete EN 934-2:T12	
Chloride ion content	≤ 0,1% by mass
Alkali content	≤ 1,0% by mass
Corrosion behaviour	<b>Contains the following components from EN 934-1: 2008, Annex A.2: Nitrates</b>

**Health hazard:** Hidrozim Fluid does not contain toxic substances; however attention must be paid to avoid contact with the skin, eyes or not to be swallowed. In case of contact to skin or to eyes, rinsing is required with clean running water. If swallowed, medical assistance must be immediately requested. Additional formations are provided in Material Safety Data Sheet for the material.

**Fire:** Hidrozim Fluid is a non-flammable liquid. Additional formations are provided in Material Safety Data Sheet for the material.

**Cleaning and deposit:** Hidrozim Fluid is cleaned with water. Old and used packaging must be disposed according to local regulations for that type of waste. Additional formations are provided in Material Safety Data Sheet for the material.