

With the help of HEMIX GROUP additives and our assistance, our customers achieve performance, significantly reduce labor costs, save resources, and improve product quality.

HEMIX LH

Superplasticizer for working with ready-mix concrete at low temperatures

HEMIX LH is based on polycarboxylate ethers and enhanced with antifreeze and additional components. The product accelerates the strength development of the concrete mixture and ensures preservation at low temperatures (down to -25°C).

This additive serves as a superplasticizer, early strength accelerator, water reducer, and corrosion inhibitor.

HEMIX LH is classified as an antifreeze additive for hot-weather concreting, meeting the requirements of GOST standards 24211-2008 "Admixtures for concretes and mortars. General specifications."

Application

HEMIX LH is a superplasticizer and antifreeze additive for the production of concrete of class B7.5 and higher at low temperatures (down to -25°C).

The product can be used in concrete production for prestressed structures. Early strength development is achieved thanks to the thermal curing of the concrete.

The additive is suitable for producing high-slump concrete ($> 22\text{ cm}$).

Advantages

HEMIX LH facilitates the production of concrete mixtures with high strength, frost resistance, water resistance, and flowability. As a result, the workability of low-slump concrete mixtures is significantly improved at low temperatures.

The use of this additive enables:

- Obtaining mixtures with higher plasticizing and frost-resistant properties at a lower water-cement ratio
- Achieving rapid strength development of the concrete
- Ensuring concrete curing at low temperatures (down to -25°C)
- Increasing workability from grade П1 to grade П5 (according to GOST standards) without compromising concrete strength
- Enhancing workability preservation
- Increasing segregation resistance
- Improving the quality of concrete structure compaction
- Reducing concrete corrosion

Reduced cement consumption helps reduce exothermic reactions, minimizing the risk of thermal cracking.

A lower water-cement ratio helps achieve early strength development and speed up the construction process.

Enhanced frost and water resistance extend the service life of concrete structures.

A wide range of chemical additives helps optimize every aspect of concrete production: from improving physical properties to enhancing product durability and reducing production costs.

All additives are produced at HEMIX GROUP's modern plants located in the Far East region. We guarantee high quality and compliance with the required standards.

We understand that additives are merely a part of concrete production. Effective technical support is just as essential for key processes.

To unlock the full potential of our products, we provide complete technical support services for plants manufacturing ready-mix concrete, reinforced concrete, vibro-pressed products, and more.

Appearance:

Aqueous solution, amber color

Predicted concentration:

100%

Density (at 20°C):

$1.075 \pm 0.02\text{ g/cm}^3$

pH (at 20°C):

7.3

Maximum Chloride Ion Content:

$<0.1\%$

up to 25%

less cement used

+2 grades

and more to water resistance

+50

and more freeze-thaw cycles

Our extensive experience and professionalism allow us to tackle tasks of any level and provide the highest production efficiency.

HEMIX LH

Mechanism

The mechanism is based on the adsorption of polycarboxylate ether molecules with different molecular masses, combined with a complex effect that accelerates early strength development.

HEMIX LH facilitates rapid dispersion, causing electrostatic repulsion and preventing particles from approaching each other and forming conglomerates. This reduces the amount of water required to achieve concrete mixtures with the necessary properties.

Additionally, the solubility of cement decreases, leading to the hydration of clinker minerals. The quantity of new compounds within the cement matrix increases, ultimately enhancing the strength of the mixture.

Application Method

1. Shake or mix the additive before use.
2. Add to the concrete mixture after adding the necessary amount of water.
3. Ensure adequate mixing time after the additive is introduced.

⚠ NOTE: Do not add to the dry mixture.

Dosage

The product should be added to the mix at the rate of 1.00-2.2% of the cement weight.

Note that entrained air may impact the concrete strength

The precise dosage depends on concrete specifications and is calculated through laboratory testing.

Compatibility

HEMIX LH is best used with HEMIX OXY additive for better air entrainment.

Packaging

1 000 kg containers

220 kg drums

Smaller containers (5 – 20 kg) are also available for laboratory and field trials

Transportation

Non-flammable and non-toxic product.

No special transportation requirements

⚠ Precautions

- Use protective gloves when working with the additive
- In case of skin contact, rinse with water
- Avoid contact with mucous membranes. In case of contact, rinse thoroughly with water

Shelf Life: 12 months

Store in closed containers at temperatures above +5 °C. Avoid direct sunlight and protect from high temperatures.

Product properties may alter before the expiration date if the storage guidelines are not followed.

**CONSTRUCTION INNOVATIONS
BEGIN WITH HEMIX GROUP**