
MEGATRON ADDITIVE

Dry hydrophobic additive for concrete and mortars

Description of the material:

The dry construction mixture "Megatron Additive" is used for waterproofing concrete and reinforced concrete structures and products during monolithic concreting. The use of this additive allows obtaining concrete with high water resistance, frost resistance, and increased chemical and corrosion resistance.

The additive should be added directly during mixing at the construction site, in the mixer, or at the concrete (mortar) node. It is important to achieve a homogeneous mixture of "Additive" with concrete by thoroughly mixing them. Do not add the dry additive mixture to the concrete during mixing.

For joints, connections, junctions, and penetration of communications, it is recommended to use bentonite hydro insulation "Megatron," "Megatron Seam," and hydro sponges of various types.

Advantages of "Megatron Additive":

- Purpose: "Megatron Additive" allows creating effective protection against moisture throughout the thickness of the concrete structure, which is especially important in cases where there may be a risk of moisture penetration through pores or microcracks in the concrete.

- Increase in operational characteristics: The use of "Megatron Additive" allows obtaining concrete with increased indicators of water resistance, frost resistance, chemical, and corrosion resistance throughout the entire life cycle of the structure.

- Wide range of applications: "Megatron Additive" is used to create reliable and effective waterproofing on various types of objects to protect concrete structures in any conditions. For example, this additive can be used in the construction of underground shelters, waterproofing of foundations, pools, liquid reservoirs, or any other structures where water may be a problem.

- Waterproofing: The entire concrete becomes a barrier to moisture, preventing its penetration into the interior of the premises.

- Self-healing ability: This characteristic means that in the presence of small cracks or pores in the concrete, "Megatron Additive" can fill these defects independently, restoring the tightness of the structure.

- Ease of use: "Megatron Additive" is easily and conveniently added to the concrete mixture during construction. "Megatron Additive" can be added directly during the mixing of the concrete mixture, which does not require additional complex procedures or equipment. This simplifies the integration of the additive into the construction process.

- Unlimited shelf life: "Megatron Additive" provides this long-term protection without losing its properties over time. This makes it an effective and economically viable solution for waterproofing building structures since it does not require constant renewal or replacement, which may require significant efforts and costs.

- Concrete with the additive does not require additional protection: The concrete itself becomes a sufficiently effective protection against moisture and does not require additional measures to strengthen its waterproofing properties. The absence of the need for additional materials and work on their installation leads to significant savings. Since concrete with the additive itself is already a reliable protection against moisture, there is less need for regular maintenance of waterproofing.

- Homogeneity: Concrete with "Megatron Additive" is a single, continuous structure.

- Reduction of work terms: The use of "Megatron Additive" allows for effective and faster waterproofing of concrete structures, which saves time and resources at the construction site, allowing waterproofing work to be completed faster than with traditional methods.

- Environmental friendliness: "Megatron Additive" is manufactured and used in compliance with environmental standards and norms and does not have a negative impact on the environment. Only clean ecological components are included in the additive. The material is environmentally friendly and radioactively safe. Allowed for use in household drinking water supply.

Application Areas:

- Waterproofing of prefabricated concrete structures (foundation blocks, floor panels, balcony slabs, etc.).
- Waterproofing of monolithic concrete structures (foundation slabs, cement-based screeds, columns, stair flights, etc.).
- Waterproofing of industrial facilities (foundation slabs, columns, wall panels, etc.).
- Waterproofing of agricultural sector facilities (silos, bunkers, gas holders, underground and aboveground galleries, etc.).
- Waterproofing of water management structures (pipelines, reservoirs, wells, boreholes, etc.).
- Waterproofing of mining and mining objects.
- Waterproofing of treatment facilities (septic tanks, settling tanks, etc.).

Application Recommendations:

Preparation of the mixture: The dry mixture "Megatron Additive" is mixed with water in a ratio of 1:1.5. This solution is added to the concrete mixer during concrete transportation. This ensures uniform distribution of active components within the concrete.

The active chemical components react with calcium and aluminum ion complexes, various oxides, and metal salts contained in the concrete. This reaction contributes to the formation of a waterproof barrier that prevents moisture penetration.

An additional method of introducing the chemical additive into the concrete involves adding it at the concrete plant along with inert fillers during the mixing process. This method allows for uniform distribution of the additive throughout the mass of the concrete mixture even before it reaches the construction site.

An important aspect of this approach is that concrete production at the plant is controlled and takes place under conditions specifically designed for this purpose. This ensures a high degree of accuracy and reliability of the process, as well as ensures high-quality concrete with the additive.

Compared to introducing the additive directly at the construction site, this method can simplify

and speed up the construction process. Moreover, it allows for the preparation of concrete in advance considering specific project requirements and conditions.

Such a method of introducing the chemical additive can be particularly useful in large construction projects where the speed and quality of concrete production are crucial for successful project completion.

Technical Specifications

Characteristics	Value
Appearance	Powdery light-gray powder, free of impurities
Moisture content, % by weight	0,5÷0,7
Bulk density in uncompressed state, g/cm ³	1,3÷1,4
Waterproofing grade	Above W12
Increase in compressive strength, %	up to 10
Increase in frost resistance, number of cycles	Not less than 250÷300
Concrete resistance to acid exposure	High
Concrete resistance to alkali exposure	High
Concrete resistance to petroleum products	High
Ultraviolet resistance	Not affected
Application temperature, °C	+5
Operating temperature, °C	-60 ÷ +130
Storage	In a dry room, in sealed packaging

Material Consumption:

The dosage of the additive ranges from 1.0% of the dry mixture by weight of cement, but it is recommended not less than 4 kg/m³.

Storage:

The warranty storage period is 12 months at a temperature from -20 to +60°C in undamaged factory packaging.

Safety Measures:

When using "Megatron Additive," the following safety measures should be observed:

- Ensure safety in the workplace. Ensure that the workplace is clean, empty, and free of hazardous materials. Install barriers and safety signs where necessary.
- Use appropriate eye and respiratory protection. Dust and other substances may be released during waterproofing, which can pose a health risk. Use protective goggles and respirators.
- Use safe tools and equipment. Make sure that the tools and equipment you use are safe for work. Check them before use.
- When working with waterproofing, follow safety rules for working with liquids and chemicals.
- Follow all safety requirements established by relevant organizations and manufacturers.
- Make sure that the materials you use are environmentally safe and do not have a negative impact on the environment.