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## MEGATRON PENETRATING

### Penetrating hydro insulation for protecting concrete structures

#### Material description:

Megatron Penetrating is designed to protect prefabricated and monolithic concrete and reinforced concrete structures.

This type of waterproofing improves the indicators of concrete waterproofness, strength, and frost resistance. It protects structures from the effects of aggressive environments: acids, alkalis, sewage and groundwaters, seawater.

It is used for waterproofing surfaces with cracks up to 0.4 mm wide.

#### Advantages of penetrating waterproofing:

- **Reliable protection:** Penetrating waterproofing agents penetrate deep into the material, creating a network of insoluble crystal hydrates in the structure of the concrete, creating a reliable protective barrier and ensuring high efficiency in moisture protection;

- **High bond strength with the substrate:** Bond strength with the substrate is one of the most important characteristics of penetrating waterproofing. It determines how securely the material adheres to the surface and how well it protects against moisture and other negative factors.

- **Chemical and corrosion resistance:** Megatron Penetrating has high chemical resistance, allowing it to effectively withstand the influence of various chemical compounds. This is especially important in conditions where the structure may come into contact with aggressive substances such as acids, alkalis, salts, and other chemical solutions.

- **Wide range of applications:** Penetrating waterproofing can be applied to various types of concrete structures (cement screeds and plaster, foundation walls, foundation slabs); Allows for the restoration of horizontal waterproofing by injection in concrete and brick structures.

- **Ease of use:** applied exclusively to a wet surface (does not require surface drying) from any accessible side of the structure. Does not require additional protection, works against water flow.

- **Durability:** Penetrating waterproofing protects structures from moisture and other aggressive factors throughout the entire service

life of buildings and structures; it is not subject to surface, mechanical damage; increases the chemical and corrosion resistance of structures, as well as the frost resistance of concrete.

- **Cost-effectiveness:** Penetrating waterproofing is easy to use and does not require drying the surface of the structure, applied from any accessible side of the structure (does not require excavation).

- **Environmental friendliness:** Penetrating waterproofing agents do not contain harmful substances and do not harm the environment, permitted for use in drinking water tanks.

#### Scope of application:

- Waterproofing of prefabricated concrete structures (foundation blocks, floor panels, balcony slabs, etc.);

- Performing horizontal waterproofing;

- Waterproofing of monolithic concrete structures (foundation slabs, cement-based screeds, columns, stair flights, etc.);

- Waterproofing of industrial structures (foundation slabs, columns, wall panels, etc.);

- Waterproofing of agricultural structures (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.).

#### Recommendations for Application:

Megatron Penetrating should be applied according to the manufacturer's technological regulations.

Before applying the penetrating waterproofing, it is necessary to prepare the base to ensure the best adhesion and penetration quality. For this, the base surface should be clean, strong, and saturated with water as much as possible. Finally, the surface should be rough to ensure better adhesion between the waterproofing and the base.

Cleaning the base before applying the penetrating waterproofing can be done manually. Mechanized tools such as water jetting devices can also be used.

For manual cleaning, metal brushes or spatulas can be used to remove dirt and dust. If there are oil stains on the base surface, special solvents can be used to remove the dirt.

Water jetting devices help remove dirt with a high-pressure water flow and saturate the concrete with water to the maximum.

Megatron Penetrating is applied to a thoroughly moistened surface of the concrete structure from any of the available sides (internal or external) regardless of the water pressure direction. The material is effective even in the presence of high hydrostatic water pressure.

Before starting to mix the dry mixture with water, prepare the working tools and containers for mixing.

Add water gradually, following the ratio of 1 part water to 2 parts dry mixture. This means that for every one part of water, two parts of the dry component should be added by volume. Start mixing using a mechanical mixer or spatula if mixing manually.

After adding water, mix the material well to achieve a homogeneous consistency. Then wait 1-2 minutes before mixing the mixture again well. If necessary, a small amount of water can be added, considering the application method and the consistency needed.

Carefully observe the consistency of the mixture. It should be uniform, without lumps or undissolved dry parts.

After mixing is complete, leave the mixture for 1-2 minutes, allowing it to stand a little. Before applying, mix the mixture thoroughly again to ensure a homogeneous consistency.

Prepare the amount of solution that can be used within 30 minutes. During use, regularly stir the solution. Re-adding water to the solution is not allowed.

After obtaining a homogeneous mass, it should be applied to the surface with a brush or sprayer under pressure, in two layers. The first layer should harden for 4-6 hours before applying the second layer. Before applying the second layer, moisten the surface. After applying the waterproofing material, allow it time to dry and

harden completely to achieve maximum waterproofing efficiency. After complete hardening, it is recommended to protect the surface of the structure from direct sunlight and additionally moisten it.

Work on applying the material should be carried out at a temperature not lower than +5°C.

Attention! All cracks, joints, seams, junctions, communication penetrations, and pressure leaks must be sealed with Megatron Seam and Megatron Sealant.

### Technical Specifications

Characteristics	Value
Appearance	Powdery dark-gray powder, free from impurities
Moisture content, % by weight	0,5÷0,7
Setting time, min	
Start	15÷20
End	30-40
Bulk density in uncompressed state, g/cm <sup>3</sup>	1,3
Increase in water resistance, degree	5
Increase in frost resistance, number of cycles	Not less than 100÷150
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
Storage warranty period, months	12

### Material Consumption:

Material consumption ranges from 0.8 - 1.2 kg/m<sup>2</sup> depending on the relief of the surface.

**Storage:**

The warranty storage period is 12 months at a temperature of -20 to +60°C in the original intact packaging.

**Safety Measures:**

During the application of penetrating waterproofing, it is necessary to observe the following safety measures:

- Ensure workplace safety. Make sure the workplace is clean, empty, and free from hazardous materials. Install barriers and safety signs where necessary.
- Use appropriate eye and respiratory protection. Dust and other substances may be released during the application of waterproofing, posing a health risk. Use protective goggles and respirators.
- Use safe tools and equipment. Ensure that the tools and equipment you are using 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 the materials you are using are environmentally safe and do not have a negative impact on the environment.