
MEGATRON REPAIR P-4**Repair dry mix of poured type for restoring horizontal surfaces****Material Description:**

Shrinkage-free repair dry mix of poured type is an effective solution for quick and high-quality structural repair of horizontal surfaces made of concrete and reinforced concrete.

Advantages of "Megatron Repair R-4":

- **High strength:** The mix has high strength, allowing repair work on surfaces enduring heavy loads. This is particularly important for industrial, commercial, or infrastructural facilities.
- **High flowability:** The mix has a liquid consistency, making it easy to apply on horizontal surfaces. This helps reduce repair time and ensure a homogeneous layer without voids or hollow spaces.
- **Shrinkage-free:** One of the main advantages of this mix is the absence of significant shrinkage deformations after drying. This allows filling cracks and leveling surfaces without the risk of further crack formation.
- **High adhesion:** The mix has high adhesion to concrete and reinforced concrete, ensuring strong bonding with the repaired surface. This helps increase durability and ensure longevity of repair works.
- **Frost resistance:** Mixes of this type have high frost resistance, allowing their use outdoors or in low-temperature conditions without the risk of surface damage.
- **Waterproofness:** Shrinkage-free repair dry mix of poured type has high density, allowing it to retain water and prevent moisture penetration through the repaired surface. This is particularly useful in damp environments or areas with high groundwater levels.
- **High abrasion resistance:** The mix has high abrasion resistance, allowing it to withstand intensive loads, friction, and wear. This is especially important for surfaces subjected to constant traffic or mechanical impact.
- **Easy to use:** Shrinkage-free repair dry mix of poured type easily mixes with water, making it convenient to work with.

Applications:

- **Road construction:** Used for repairing concrete road surfaces, highways, airstrips, and parking areas. Due to its high strength and load resistance, this mix effectively restores damaged road surfaces.
- **Infrastructure:** Used for repairing bridges, structural supports, piers, tunnels, and other hydraulic structures. It helps restore structural integrity and protect structures from further deterioration.
- **Construction and repair of industrial facilities:** Applied for repairing reinforced structures in industrial buildings, such as beams, bridge decks, columns, etc. This mix restores damaged elements and ensures their strength and durability.
- **Hydraulic structures:** Used for repairing hydraulic structures, including docks, intakes, canals, and other water transport facilities. This mix is resistant to moisture and aggressive environments, providing effective protection and structure restoration.
- **Metal structures:** Used for anchoring metal elements in concrete bases. This mix ensures reliable bonding of metal to concrete, improving the strength and stability of structures.

Overall, shrinkage-free repair dry mix of poured type is a versatile solution for repairing concrete and reinforced concrete structures in various construction and infrastructure sectors. It allows for quick and efficient restoration of damaged surfaces, ensuring their strength, longevity, and resistance to aggressive factors.

Recommendations for Application:

Before applying the repair mixture, it is necessary to prepare the base to ensure the best adhesion quality. For this purpose, the base surface should be clean, firm, and rough to ensure better adhesion between the repair mixture and the base.

Cleaning the base before applying the penetrating repair mixture can be done using manual equipment. Mechanized tools such as water jetting equipment 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 equipment helps remove dirt using a high-pressure water stream.

When using the non-shrink repair dry mix for repairing reinforced structures, it is necessary to clean the reinforcement from corrosion or install additional reinforcement.

Before application, prepare manual tools, as well as buckets and water for mixing.

To prepare the repair mixture correctly, water should be added to the mixture, not vice versa, in a ratio of 1.2 liters of water per 15 kg of mixture by weight. Mix mechanically for 2-3 minutes until a homogeneous, flowable mass without lumps is formed. The water content may depend on the ambient temperature and relative humidity.

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

After complete hardening, it is recommended to protect the surface of the structure from direct sunlight and additionally moisten it.

Application work should be carried out at a temperature not lower than +5°C.

Attention! All cracks, joints, seams, junctions, penetrations, and pressure leaks must be sealed using Megatron SUTURE and Megatron PLUG.

Application:

Pour the prepared, closed mixture onto the concrete surface and evenly distribute it until all voids are filled.

During application, it is necessary to adhere to the recommended layer thickness, which usually should not exceed 75-100 mm.

After applying the mixture to fill the damage, it is necessary to give it time to dry and harden. Usually, after 24 hours, grinding and finishing of the restored surface can be started. During grinding, achieve a smooth and even texture to improve the appearance and quality of the surface.

It is important to consider the manufacturer's recommendations regarding setting time,

temperature, and humidity, as these factors can affect the quality and speed of the mixture's curing process.

Technical Specifications

Characteristics	Value
Appearance	Powdery dark-gray powder, with filler up to 3.0 mm
Moisture content, % by weight	0,5÷0,7
Setting time, min	
Start	40÷45
End	50÷60
Bulk density in uncompressed state, g/cm ³	1,89
Adhesion to concrete, MPa	3÷4
Compressive strength, MPa	
2 days	32-36
7 days	40-45
28 days	80-100
Waterproof grade, W	0,25
Frost resistance, number of cycles, F	W 16
UV Resistance	F300
Application temperature, °C	Not affected
Operating temperature, °C	+5
Shelf life, months	-60 ÷ +130
Moisture content, % by weight	12

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 repair works, the following safety measures should be observed:

- Ensure safety at the workplace. Make sure the workplace is clean, empty, and free of hazardous materials. Install barriers and safety signs where necessary.
- Use appropriate protection for eyes and respiratory tract. When closing the repair mixture, dust and other substances may be released, 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.
- Adhere to safety regulations when handling cements and chemicals.
- Follow all safety requirements established by relevant organizations and manufacturers.