

Description

XYPEX MEGAMIX II is a thick repair mortar for the patching and resurfacing of deteriorated concrete. Megamix II has been specifically formulated to produce superior bond, low shrinkage, chemical durability and high strength. It is a one component mortar and can be either sprayed or trowel applied at a thickness of 10 - 50 mm per layer. The high performance characteristics of Megamix II are enhanced by Xypex's unique crystalline waterproofing and protection technology.

Megamix II with Bio-San is formulated to have superior properties against microbial induced corrosion resulting from bio-film formation thus protecting repaired surfaces in sewer environments. It significantly extends the life of sewer and waste water infrastructure where acid producing sewer bacteria cause MIC (microbial induced corrosion).

Recommended for:

- Manholes / sewer pipes
- Pump and lift stations
- Head works
- Septic tanks
- Digesters
- Clarifiers
- Industrial structures

Advantages

- Excellent adhesion and bond to concrete substrates
- Protects against microbial induced corrosion
- Low shrinkage, fiber reinforced
- Resistant to acid attack
- Very resistant to severe sulphate exposure
- Highly resistant to chloride diffusion
- Ready to use – just add water
- Vertical and overhead concrete repair; sprayable

Coverage

At 20 mm thickness, each 25 kg bag of Megamix II with Bio-San will cover approximately 0.62 to 0.65 m².

Product Characteristics

Appearance and Colour	grey powder
Setting Time of Fresh Mortar	initial: 3 - 4,5 hrs / final: 5 - 7 hrs
Adhesive Bond	≥ 2,0 MPa
Compressive Strength at 28 d (MPa)	60 MPa
Elastic Modulus	33,5 GPa
Carbonation Depth	dK ≤ control concrete
Durability, Thermal Compatibility	≥ 2,0 MPa after 30 cycles
Capillary Absorption	0,16 kg/m ² /hr ^{0.5}
Sulphate Resistance (12 mo expansion)	≤ 0,03%
Acid Resistance	negligible mass loss
Salt Scaling Resistance	no scaling
MIC Resistance (10 yr)	9x reduction in corrosion loss
Chloride Ion Content	≤ 0,05% of mass
Reaction to Fire	class A1
Dangerous Substances	meets Clause 5.4
Acrylic Content	acrylic free
VOC	no VOC

Surface Preparation

Remove loose, delaminated or unsound concrete by high pressure water blast, chipping, or other means. Complete structural or reinforcing steel corrosion repairs as necessary. Saw cut perimeter of repair area to a minimum of 10 mm depth (20 mm preferred). Remove dust, micro fractured particles and foreign material from the repair area by pressure washing or

other suitable means necessary to clean surface to obtain desired bond. A roughened surface texture is typically required to achieve adequate bond. Maintain surface in saturated surface dry (SSD) condition for application of Megamix II with Bio-San mortar.

Mixing Procedures

Best results are achieved using a mechanical mortar mixer and paddle with a capacity for low speed continuous blending. For small quantities of material, a drill and paddle mixer can be substituted. Ensure mixing equipment does not remove fibres from the mix. Mix typically requires 3,0 to 3,5 litres of water per 25 kg bag. Use only sufficient clean water to create a medium to stiff mortar consistency. A trial application is recommended to confirm the water content to produce specified compressive and bond strength requirements under project conditions. Add approximately 90% of the required amount of water to the mixer and then add the Megamix II powder. Mix briefly and add additional water to achieve the required consistency. Mix 3 - 5 minutes or as necessary to achieve a uniform consistency. Over mixing or delivery delays may result in product stiffening. Do not over mix or over water.

Application Procedures

It is recommended that prior to installation, a test section be completed to demonstrate acceptable properties. Ensure an ambient temperature range of 3,0°C - 30°C during application and curing. Spray the repair area with clean water and allow the surface to come to a saturated, surface dry (SSD) condition. Maintain concrete substrate in this condition during the application process. For improved bond, apply scrub coat of Megamix II with Bio-San onto prepared surface using a stiff bristle brush. Apply full coat of Megamix II while scrub coat is still wet (generally within 20 minutes). When applying Megamix II by low pressure spray equipment, use sufficient velocity to compact and build the thickness of the mortar. The spray nozzle should have a minimum 12 mm orifice to prevent clogging. Spray-apply Megamix II, at a right angle to surface, at a distance of 450 - 600 mm. When applying Megamix II with a trowel ensure that the Megamix II is fully consolidated and worked well into the scrub coat and substrate. Complete finishing operations as quickly as possible. Megamix II can be finished to vary-ing surface textures, including a rough finish directly from spraying nozzle, to semi-smooth using a wood or rubber float or smooth using a steel trowel.

Curing

Apply continuous source of moisture by spray, or utilize wet burlap and polyethylene sheet or other suitable means for a minimum of 3 days. Containment structures (e.g. tanks) can be filled with water following 3 days moist curing of the Megamix II coating. Fog spray will typically be required prior to final set. Curing compounds are not permitted on applications of with Megamix II with Bio-San.

Packaging

Xypex Megamix II with Bio-San is available in 25 kg bags.

Storage

Xypex products must be stored dry at a minimum temperature of 7°C. Shelf life is two years¹ when stored under proper conditions.

¹ The user of this product must check their local health and safety regulations, as cementitious products that contain chromium VI may have a reduced shelf life. For those markets subject to regulations concerning the control of soluble chromium VI, where the limit is set at 2 ppm, this product has a shelf life of 12 months.

Health & Safety

Xypex is alkaline. As a cementitious mixture, Xypex may cause skin and eye irritation. When working, it is therefore necessary to comply with the health and safety regulations. Please refer to the safety data sheet. The product residues disposal must follow local regulations.

Certification

Xypex Megamix II with Bio-San is certified as Class R4 according to EN 1504-3. The certification of the product, and regular audits of FPC are carried out by Notified Body 1020 TZUS.

Warranty

The Manufacturer warrants that the products manufactured by it shall be free from material defects and will be consistent with its normal high quality. Should any of the products be proven defective, the liability to the Manufacturer shall be limited to replacement of the product ex factory. The Manufacturer makes no warranty as to merchantability or fitness for the particular purpose and the warranty is in lieu of all other warranties expressed or implied. The user shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith.



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