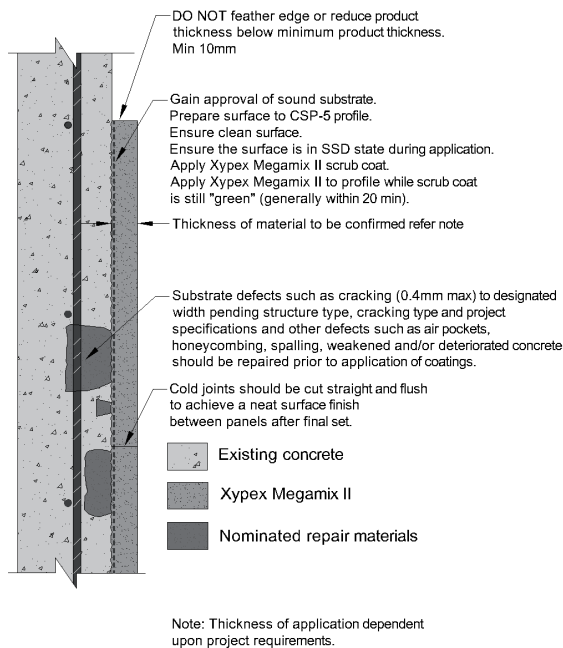


XYPEX CRYSTALLINE REPAIR SYSTEM

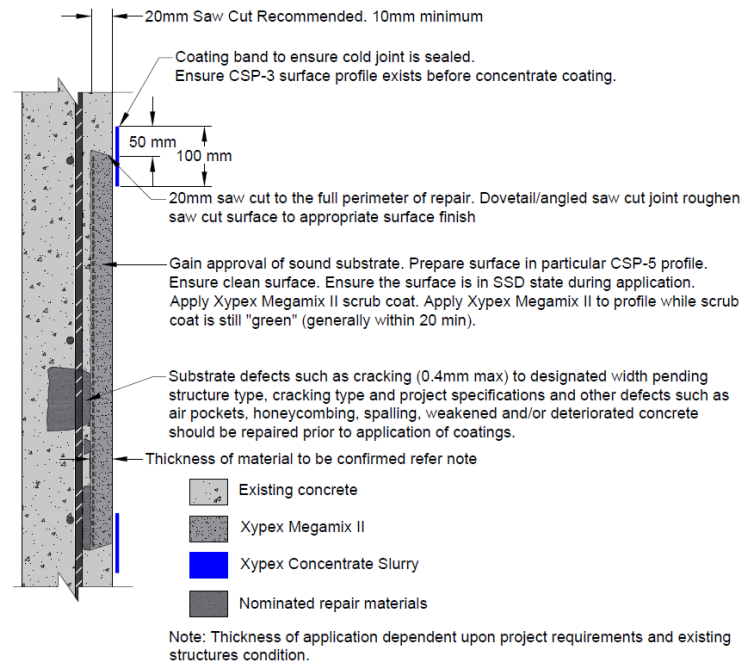
Application of Xypex Megamix II High-Performance Repair Mortar

2018-06

The information presented is in addition to Xypex product data sheets and is not meant to replace these or any other installation guides but rather is meant to give a general description of the installation practices and procedures surrounding the use of Xypex products for waterproofing and protecting concrete and while normally provide an acceptable final appearance they are not meant as aesthetic finishes. Refer to Safety Data Sheets for safety information, applicators need to use all products and equipment in line with manufacturers and industry requirements.



Concrete Coating



Concrete Repair Coating

GENERAL

Xypex Megamix II is a high-performance, high-build repair mortar for the patching and resurfacing of the deteriorated concrete. *Xypex 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 between 10mm and 50mm per layer. The high performance characteristics of *Xypex Megamix II* are enhanced by Xypex's unique Crystalline Waterproofing and Protection Technology.

This Method Statement details the procedure of *Xypex Megamix II* application for Coatings or Repair Coating Application and must be used in conjunction with the product datasheet.

PRODUCTS

Xypex Megamix II
Xypex Concentrate

SURFACE PREPARATION

1. In the case of deteriorated concrete surfaces, saw cut perimeter of the repair min 10 mm depth and roughen the sides to a CSP-5 profile. Remove all loose and delaminated material until a sound substrate is exposed. Removal of deteriorated concrete is generally achieved by hydraulic or pneumatic jackhammer or hydro-demolition. If a jackhammer must be used, the exposed area must be washed with high-pressure water blasting to remove all loose materials and debris from the concrete surface and also to saturate the substrate. Care is to be taken to avoid damage to the sound concrete adjacent/below the repair area. Alternatively, other methods such as scalers, shot blasting, abrasive blasting or other specialist equipment may be used.
2. To ensure strong bonding between the concrete surface and the applied mortar, the concrete substrate surface must be clean and free of laitance, dirt, film, paint, coating or other foreign material. The concrete surface must also have an open capillary system to provide "tooth and suction" for Xypex treatment. A surface texture CSP-5 as

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per the International Concrete Repair Institute Guidelines and, refer to Surface Profile Chips, must be achieved.

3. Clean the prepared surface by high pressure water blasting (approx 5000 psi or as required). Include 50 mm of surrounding concrete for cold joint application. Blast to remove dirt, debris, loose particles and to provide an open capillary surface. Conduct test wash prior to full application. Achieve surface profile CSP-5 to International Concrete Repair Institute Guidelines, refer to Surface Profile Chips.
4. *Xypex Megamix II* requires a Saturated Surface Dry (SSD) condition of the substrate. The concrete surface must be thoroughly saturated with clean water prior to the application. If the surface dries out after initial water application, it must be re-wetted using a fine mist spray of clean water. However at the time of application, the excess water is to be removed, the surface must present no glistening water on the surface.

MIXING PROCEDURE MEGAMIX II

1. A mechanical mortar mixer and paddle with a capacity for low speed continuous blending can be used. Ensure mixing equipment is clean and does not remove fibers from the mix.
2. *Xypex Megamix II* typically requires 2.4 to 2.8 litres of clean potable water (8 to 25 water degree temp recommended) for every 20kg pail. DO NOT exceed maximum water content of 2.8 litres.
3. 2.4 litres of water per 20kg should be suitable for vertical wall applications but for applications requiring higher workability or due to project conditions additional water up to a maximum 2.8 litres may be applied. Xypex recommends conducting a test mix and application to check the water content to produce a suitable material workability under the project conditions.
4. Add approx. 90% of the required amount of water to a mixer/pail and then add the *Xypex Megamix II* powder. Mix briefly and add the remaining water to the mix to achieve the required consistency (2.4 to 2.8 litres total).

NOTE: It is a requirement the mixing is carried out for 3-5 minutes to emulsify all polymers, blend fiber's and provide a uniform consistency. Over mixing or delivery delays may result in product stiffening. DO NOT over water.

APPLICATION

1. To improve the bond, apply scrub coat of *Xypex Megamix II* onto prepared surface.
2. Apply full coat of *Xypex Megamix II* while scrub coat is still "green" (generally within 20 minutes).
3. When applying *Xypex Megamix II* with a trowel ensure that the *Xypex Megamix II* is fully consolidated and worked well into the scrub coat and substrate. Complete finishing operations as quickly as possible.
4. When applying *Xypex 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 12.5 mm orifice to prevent clogging. Spray *Xypex Megamix II*, at a right angle to surface.
5. The thickness of the *Xypex Megamix II* application will depend on specific job site conditions and requirements. As a general guide, application thickness should be between 10 mm and 50 mm on vertical surface and 40 mm on overhead applications.
6. DO NOT use any excess water to achieve easier troweling or finishing.
7. Provide a CSP-3 profile for *Xypex Concentrate* application/coating adjacent to cold joint (50 mm).

XYPEX CRYSTALLINE REPAIR SYSTEM

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2018-06

CURING

Curing is essential to obtain the optimum quality and durability of the *Xypex Megamix II* Mortar. The repaired areas should be protected from rapid drying out utilising continuous moist curing methods (a fine mist spray of clean water) for a minimum of 72 hours. Alternatively, a curing compound which must be compliant to AS 3799 or ASTM C309 may be used. Or, Xycrylic admixture. Contact your Xypex Representative for all possible alternative curing applications to moist curing. Containment structures such as reservoirs and tanks can be filled with water following 3 days moist curing and allowed 12 days setting (15 days total). For partially hot liquids (waste water) and chemical retaining structures, allow 18 days setting (21 days total).

DO NOT use *Xypex Gamma Cure*.

Cure *Xypex Concentrate* as per appropriate data sheet. DO NOT use *Xypex Gamma Cure*.

NOTE: Should curing and setting periods not be sufficient for project reasons. Contact Xypex Technical Department for alternative methods and coatings.

NOTE

1. In most cases, early curing procedures will be required prior to final set. This typically involves use of fog spray or other suitable methods such as evaporation retarding compounds following finishing.
2. *Xypex Megamix II* should not be mixed and placed at the temperatures below 4°C or above 30°C. Protect the surface from rapid evaporation (hot and/or cold and windy conditions).
3. *Xypex Megamix II* can be extended with clean coarse aggregate with the maximum size of 10mm in specific applications. Use 11 kg of aggregate per 20 kg pail. Contact Xypex Technical Department or your local Xypex Representative.
4. For any application greater than 50 mm thickness contact the Xypex Technical Department or your local Xypex Representative.
5. Over mixing or delivery delays may result in product stiffening. DO NOT over water.

6. Prior to installation it is recommended that a test section be completed under anticipated ambient and project conditions to check mixing ratios, bond strength, workability, finishing, curing, surface preparation etc.
7. Refer to Safety Data Sheets for Safe Handling procedures.
8. For enhanced chemical protection and crack healing of the substrate *Xypex Concentrate* may be applied to the broom finished cold joints of the *Xypex Megamix II* as soon as the surface will accept *Xypex Concentrate* without being disturbed. Mix *Xypex Concentrate* as per data sheet (0.8-1.0 kg/m²). When applying *Xypex Concentrate*, ensure the slurry penetrates and fills any minor defects such as cracks/pores/voids. Application by stiff bristle brush must use a circular or 'figure 8' brush stroke motion to create a non-uniformed pattern. The application and this required method is to ensure no weak plane in the coating is developed, creates a consistent/uniform application of the slurry and achieves an appropriate slurry thickness and roughness. The *Xypex Concentrate* must then be mist cured for as long as required to ensure a 3 day wet cure of *Xypex Megamix II* below it. DO NOT use *Xypex Gamma Cure* to cure *Xypex Concentrate* above *Xypex Megamix II*.