

XYPEX CRYSTALLINE TIE BOLT HOLE REPAIR

Repair of Tie Bolt Holes with Xypex Megamix II Finish

2021-07

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.

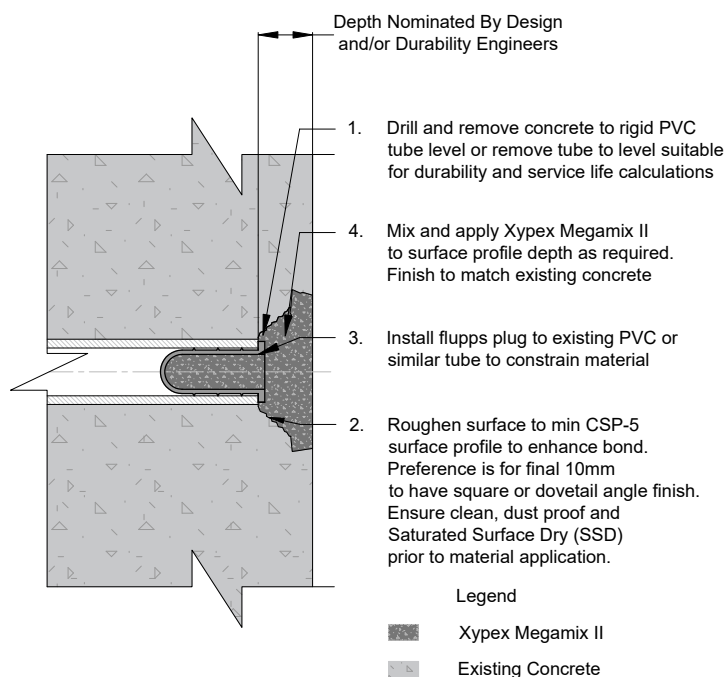


Figure 1. Tie Bolt Hole Repair – Megamix II Finish

This type of repair method applies to all structures subjected to hydrostatic pressure. The repair is intended to have a Xypex Megamix II surface finish which generally is a slightly darker color than concrete. The Xypex Megamix II is a high strength structural repair mortar which includes fibers and Xypex for waterproofing. For aesthetics, a trial application to confirm compatibility with surrounding concrete is recommended prior to full application.

Note: This method is applicable for 22mm internal diameter tie bolt holes.

SURFACE PREPARATION

1. Drill (recommended) and remove concrete and any PVC tube or remaining tie bolt hole material to a depth to suit durability requirements for the project. Recommended min 23mm. Min product depth is 10 mm.
2. Remove concrete and preferably form a dovetail angle or vertical shaped rout (a "V" shaped rout is not acceptable) around the tie bolt hole.

3. Roughen the concrete using a needler or similar. Remove all the loose and unsound materials. Care is to be taken to avoid damage to the sound concrete adjacent to the repair. Roughen to CSP-5 minimum profile.
4. Clean the rout using water blasting to remove all the dirt, debris and loose particles and saturate the substrate. Conduct test wash prior to full application.

PLUGGING LAYERS

5. Install flupp plug into tubing with 22mm internal diameter. Ensure flupps is installed to full depth possible.
6. 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.
7. Conduct plugging by mixing *Xypex Megamix II* at a rate of 20 kg dry powder to 2.7-2.8 liters clean water. Add approx. 90% of the required amount of water to a mixer/

Although every care is taken by XYPEX to ensure that the material contained in this publication is accurate, XYPEX does not guarantee the suitability, completeness or accuracy of any of the material in this publication. Consequently, XYPEX can accept no responsibility for unsuitable, incomplete or inaccurate material and application, which may be contained here. The user shall determine the suitability of the product for its intended use.

XYPEX CRYSTALLINE TIE BOLT HOLE REPAIR

Repair of Tie Bolt Holes with Xypex Megamix II Finish

2021-07

pail and then add the *Xypex Megamix II* powder. Mix briefly and add the remaining water to the mix to achieve the required consistency (2.7 to 2.8 litres total). DO NOT add more water. DO NOT exceed maximum water content of 2.8 litres.

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.

8. Place scrub coat onto exposed concrete with gloved hand and push into the surface. Place material over and into flupps and fully compact before setting of scrub coat. Take care to eliminate air pockets. *Xypex Megamix II* thickness should be 10mm min thickness and applied in layers to a maximum 50mm layer. Roughen and score the surface before applying successive layers and apply immediately following initial set while layer is still "green". Apply scrub coat between layers
9. Finish material up to the surface and finish with trowel, brush or other methods to match the surrounding concrete.
10. Cure under normal conditions by maintaining moisture by applying mist spray of clean water 3 times a day for 3 days or more frequently. In hot or arid conditions spraying may be required more frequently. Refer to *Xypex Megamix II* data sheet. DO NOT use *Xypex Gamma Cure* to cure *Xypex Megamix II*.
11. Clean edges of the repair and ensure any residual product is removed around the edges of the repair.
12. The applied repair must be protected from direct sunlight, rain, frost, wind and temperatures below 4°C for a period of no less than 48 hours after application. If plastic sheeting is used as protection it must be raised off the Xypex to allow the repair to breathe.

NOTE: Do not use high pressure water blasting for re-wetting of repaired zone and surrounding concrete surface during the first 7 days after placement. High pressure water blasting may cause damage to the repaired area.

NOTE:

- Prior to installation, it is recommended that a test hole be conducted prior to the commencement of whole surface treatment so that the method and results can be reviewed and revised where necessary. These should be completed under anticipated ambient and project conditions to demonstrate acceptable bond and after application appearance, performance.
- The Xypex treatment must not be applied under rainy conditions or when ambient temperature is below 4°C. Avoid application of the Xypex repair in hot and windy conditions as the repair may dry out prematurely. Recommended not installing in temperatures > 30°C.
- Information presented is in addition to Xypex Data Sheets and is not meant to replace these or any other information surrounding the use of Xypex Products.
- For application requirements for epoxies, grout, cement parge coat, plaster, tiles, stucco or similar products. Please contact Xypex Representative for alternative method statement.
- Refer to Safety Data Sheet for safe application requirements.
- For concrete structures that hold liquids (e.g. reservoirs, swimming pools, tanks etc). Xypex should be cured for a minimum 1 day and allowed to set for 12 days. (15 days total). For partially hot liquid (wastewater) and chemical retaining structures, allow 18 days setting (21 days total), before filling the structure with liquid. Should this period not be sufficient for project reasons. Contact Xypex Technical for alternative methods and coatings.
- For repairs requiring early trafficable/hydrostatic pressure. Contact the Xypex Technical Department for possible alternatives.