PATCH'N PLUG

PATCHING & RESURFACING

Concrete Waterproofing

Description

XYPEX PATCH'N PLUG is a specially designed, fast-setting, hydraulic cement compound for concrete patching and repair. Patch'n Plug stops flowing water in seconds and is used to seal cracks, tie holes, and other defects in concrete. The sealing performance characteristics of Patch'n Plug are enhanced by Xypex's unique crystalline waterproofing technology.

Recommended for:

- Stopping an active flow of water through cracks and defects in substrate
- Repair of tie holes, honeycombs and rock pockets
- Repair of leaking construction joints
- Sealing around pipe penetrations

Advantages

- Single component (simply add water)
- Very rapid setting
- Contains Xypex's unique crystalline chemistry for self-healing of cracks and other defects
- Quick return to service of water holding structures
- Cement based – compatible with concrete and masonry substrates
- Non-toxic / no VOCs
- NSF 61 certified

Packaging

Xypex Patch'n Plug is available in 9.1 kg pails and 27.2 kg pails.

Storage

Xypex products must be stored dry at a minimum temperature of 7ºC. Shelf life is one year when stored under proper conditions.

Coverage

One 27.2 kg pail of Xypex Patch'n Plug will produce 0.0154 cu. metres of mortar.

Test Data

Physical Property	Test Method	Laboratory Test Results
Setting Time	ASTM C266	min:sec
Initial Set Final Set		1:30 to 4:00 4:30 to 9:00
Compressive Strength	ASTM C109	MPa
@ 24 hours @ 28 days		12 25
Tensile Bond Pull-Off	CSA A23.2-6B	MPa
		0.8

Note: Samples prepared with 1 part water to 3.25 part dry powder by volume. Results may vary significantly based on environmental, project and other conditions.

Plugging Instructions

1. PREPARATION Chip out crack or other defects to a depth of 37 mm and a width of 25 mm. The slot may be saw cut instead of chipped but ensure that the slot is dovetailed or otherwise shaped such that there will be mechanical interlock of materials placed into the slot at a later stage; a "V" shaped slot is not acceptable. Do not cut rebar when creating slot. Flush away all loose materials and dirt from the cavity with water and a stiff brush.

2. MIXING Add 1 part water to 3.25 - 3.5 parts Patch'n Plug by volume and mix to the consistency of a stiff putty. Do not mix more than can be used in 3 minutes. For best results, water temperature should be approximately 15ºC - 20ºC.

3. PLUGGING Form plug with gloved hand. Place plug into cavity pressing firmly until plug is hard. When sealing cracks, begin at the point of lowest water flow and work towards the point with greatest water flow.

NOTE: Where there is a high volume of water flow due to extreme hydrostatic pressure, a bleeder hose may be necessary to relieve the water pressure while sealing the repair area. (See procedures on the next page).

a. With a hammer drill or chipping gun, if it is possible, without damaging the rebar, deepen the slot an additional 25 mm at the point of greatest water flow.

b. Place a stiff section of hose or pipe into the cavity and secure in place with Patch'n Plug to force water through the hose. Stop the water flow in the remainder of the slot per the directions above (i.e. form plug with gloved hand and press plug firmly into the cavity until it is hard.) This relieves the pressure so that the area can be patched. Allow a minimum of 24 hours for hardening.

c. Remove bleeder hose and plug remaining hole. If necessary, reduce water flow by inserting steel wool or wooden plug in the remaining hole before patching.

Patching Instructions

1. SURFACE PREPARATION Chip out faulty concrete until sound substrate is reached. Remove all loose materials from area and saturate with clean water. Allow water to be absorbed into the concrete, then remove excess water.

2. MIXING For fast repairs to concrete or masonry, add water to Patch'n Plug powder (1 part water to 3 - 3.5 parts powder by volume). Mix to a workable mortar consistency and trowel on as required. For large repairs, we recommend utilizing Xypex Megamix II. Alternatively, mix 2 parts Patch'n Plug powder with 1 part mason sand or small aggregate (10 mm minus crushed stone); utilize a similar water / powder ratio as above to create a workable mortar.

Abnormal Temperatures

During above normal ambient temperatures, mixing water should not exceed 32ºC and Xypex Patch'n Plug material should not exceed 21ºC. Below normal ambient temperatures will retard the setting time of Patch'n Plug. In this situation, Xypex materials should be stored at normal temperatures (see Storage). Temperature of mixing water can be moderated to either increase or decrease the set time. Do not use Patch'n Plug where the substrate's temperature is below 4ºC. Contact the Technical Services Department of Xypex for your particular application.

Technical Services

For more instructions, alternative application methods, or information concerning the compatibility of the Xypex treatment with other products or technologies, contact the Technical Services Department of Xypex Chemical Corporation or your local Xypex Technical Services Representative.

Certification

Xypex Patch'n Plug satisfies the requirements of EN 1504-3; Initial Type Testing (ITT) according to EN 1504-3 was certified by BSI as the Notifying Body.

Safe Handling Information

Xypex is alkaline. As a cementitious powder or mixture, Xypex may cause significant skin and eye irritation. Directions for treating these problems are clearly detailed on all Xypex pails and packaging. The Manufacturer also maintains comprehensive and up-to-date Safety Data Sheets on all its products. Each sheet contains health and safety information for the protection of workers and customers. The Manufacturer recommends you contact Xypex Chemical Corporation or your local Xypex Technical Services Representative to obtain copies of Safety Data Sheets prior to product storage or use.

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 a particular purpose and this 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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