Multiguard In-Depth Existing Crack and Joint Repair

Repairs with/without Flowing Water

Multiguard In-Depth Existing Crack and Joint Repair Instruction is specifically focused on the repair of cracks and construction joints and is considered an important part of the preparation process for Multiguard In-Depth Type A and Multiguard In-Depth Type B applications.

Material Needed

- Multiguard In-Depth Type A
- Multiguard In-Depth Type B
- Multiguard In-Depth Mortar
- Multiguard In-Depth PlugFast
- Clean mixing pails
- Clean mixing tools
- Clean water for mixing
- Chipping, chiseling or routing equipment
- 2.5 cm margin trowel
- Natural bristle concrete brush
- Safety goggles
- Rubber Gloves
- Measuring tools (by volume)
- Water sprayer

Step 1: Clean the area

Clean the area to be treated for 10 cm on each side of the crack or joint. The surface must be clean of all old surface contaminants such as oil, paints, epoxies, curing agents, form oils, grease, bitumen and laitance. There are several forms of mechanical surface preparation systems that may be used they include sandblasting, scarifying, sanding, and shot blasting. The best system to use is sandblasting (however circumstances do not always allow the use of this system).

Step 2: Chisel Chip or Route a U Channel

Chisel, Chip or Route out all cracks to a depth of 3.5 cm, and a width of 2.5 cm insuring that the cavity U shaped (rectangular not square). It is important that you do not use a V shaped cavity as it lacks the bonding integrity of the U shaped channel.

Insure that all cracks are channeled at least 10 cm beyond the visible end of the crack. In areas in which structural reinforcing steel does not allow 3.5 cm consistently, chip or chisel or route the concrete on both sides of the steel to the appropriate depth and clear the area over the steel to whatever depth is allow by the placement of the steel.

Step 3: Clean the repair area and saturate well

Clean the chase well removing any loose concrete and spray with water the entire area thoroughly. Insure that the concrete repair area is thoroughly soaked not just dampened.

Remove all pooled water, as Multiguard In-Depth Type A requires the concrete at an SSD condition (Saturated Surface Dry), meaning the concrete is to be very wet inside, but the surface is not to have pooled water.

Step 4: Apply Multiguard In-Depth PlugFast

Mix Multiguard In-Depth Plug to a putty consistency (4 parts powder to 1 part water). As this product is very fast drying insure that mixing is done rapidly and that it has not already begun setting during the mixing process.

Using gloves pick up the mixed Multiguard In-Depth PlugFast and knead the putty quickly into a workable shape and apply immediately. While applying keep firm hand pressure on the repair area until PlugFast is hardened. Insure that Multiguard In-Depth PlugFast does not exceed 1/3 of the channel height.

Precede beginning from the top to the bottom (or from one end until the other on flat surfaces) of the leaking area until all flowing water is stopped.

Clean and wet the application area insuring that all standing surface water is removed.

Step 5: Apply Multiguard In-Depth Type A

Using a clean pail mix Multiguard In-Depth Type A to a dry putty consistency (5 parts powder and 1 part water). Using either gloves place with your hands or place with a trowel into the channel a 10mm thickness of Multiguard In-Depth Type A over the plugged areas and 15 mm over the areas without waterplug until the full length of the channel has been applied. Using the 2.5 cm margin trowel pack and smooth the mixture. Mix only what can be placed in 15 minutes.

Step 6 Apply Multiguard In-Depth Mortar

Using a clean pail mix Multiguard In-Depth Crack Filler to a dry putty consistency (7 parts powder to 2 part water). Fill the rest of the channel with this mixture and using a trowel pack it firmly into place. Mix only what can be placed in 15 minutes.

Step 7 Wait for Initial Set of Multiguard In-Depth Mortar

When Multiguard In-Depth Crack Filler application has set (roughly 30 minutes from completion of application) clean and wet the area for 10 cm on either side of the application to an SSD condition.

Step 8 Clean the repair area and saturate well

Spray the repair area with water insuring that the concrete repair area is thoroughly soaked not just dampened.

Remove all pooled water as Multiguard In-Depth requires the concrete at an SSD condition (Saturated Surface Dry), meaning the concrete is to be very wet inside, but the surface is not to have pooled water.

Step 9 Apply Multiguard In-Depth Type A

Apply Multiguard In-Depth Type A as per Multiguard In-Depth Type A**pplication Instructions** insuring that the areas along both sides are extended to 15 cm beyond the crack repair.

Step 10 Apply Multiguard In-Depth Type B

Apply Multiguard In-Depth Type B as per Multiguard In-Depth Type B **Application Instructions** insuring that the areas along both sides are extended to 15 cm beyond the crack repair.

Step 11 Wet Cure

Multiguard In-Depth Applications require the presents of water to activate the CSH technology that provides long-term protection against water penetration. When Multiguard In-Depth Type B application has set (roughly 1 hour from completion of application) clean and wet the area. Keep the area damp for a minimum of 48 hours. If conditions allow extend wetting for 7 days. Protect against sun, wind and rain for a minimum of 48 hours.

Notes: **Do not acid etch**
If surface is to smooth, it must be roughened slightly for better adhesion.