

# HYDROPLUG

## Rapid Setting Cementitious Water Plugging Mortar

### Description:

HYDROPLUG is a rapid setting water plug cementitious expanding mortar. It is formulated primarily for rapid plugging of active water leakage in concrete or rock structures such as tanks, chambers, manholes, pipes, basement walls, tunnel linings. It is suitable for rapid plugging of studs, anchorages, etc. where light loads are anticipated.

HYDROPLUG is supplied as a dry powder. It is composed of blend of cement, special fillers and chemical additives. Once mixed with water, the product starts to harden in few seconds.

### Uses:

Stopping water leaks in:

- Basement, subways and below grade structures.
- Water retaining structures.
- Lift pits & inspections chamber.
- Tunnels and underground structures.
- Water reservoirs and water retaining bodies.

### Advantages:

- Easy to use mix only with clean water.
- Rapid water stopping capability.
- Chloride free.
- Non-toxic can be applied in portable water tanks.
- Excellent bond to concrete.
- Rapid plugging, provides enhanced time for further injection or repair works.
- Low exotherm, minimises thermal cracking.

### Instructions for Use:

#### Surface Preparation:

The area of application must be cleaned from loose concrete and contamination, prepare the work area by mechanical means (chisel, hammer, etc.). To ensure good adhesion, it is advised to expose the

aggregates within the concrete structure to ensure proper bonding.

Holes, cracks and fissures should be chiseled wide enough to allow better anchorage of the product.

To treat the leaking area, chisel out the leaking spot for a depth of 2 cm, then remove all loose material.

#### Mixing:

HYDROPLUG is a single component powder. Mix with clean water by adding powder to water in the pot in controlled quantities as it is fast setting. Mix the product in a small container manually by a clean spatula or mixing ruler to obtain a homogeneous mix.

Mix small quantity that can be applied immediately. Do not add extra water if the mix starts to harden. Time of setting depends on weather and water temperature.

#### Application:

Allow the material to start reaction few seconds after mixing. HYDROPLUG has an exothermic reaction mode. This will cause the mixture to heat upon initiation of reaction.

Start application of material mix. Apply the paste with pressure, to the crack using hand or a metal spatula. Force the mixture into the crack and apply pressure to the paste till initial setting start. Keep holding down the spatula or hand with pressure for 60 seconds.

If the crack is presenting running water, it is advisable to drill a relief opening. This will reduce the water pressure from the crack to allow for the application of the plugging mixture. If the opening is too big, work from the sides to the center.

If the relief hole is not achievable, mix a dense paste of HYDROPLUG and apply it by hand with pressure to the water leaking crack as a stopper. Hold tight till it

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sets and monitor the water flow. The water should stop temporarily. Then mix a proper amount of HYDROPLUG paste and apply it directly to the crack to strengthen the water plugging function. Hold it down for 60 seconds to ensure that all the crack is filled and well plugged.

Application time differs according to water leakage volume and temperature. The material may require longer time than 60 seconds to finally set and achieve its purpose. Flush away all cuttings and dirt.

## Standards:

- BS 6319 pt 2,3
- ASTM 109, C348

TECHNICAL PROPERTIES	
Appearance	Cement powder
Density	2.0 ± 0.03 kg/lit
Compressive Strength (ASTM 109) After 2 hours After 28 days	6 N/mm <sup>2</sup> 30 N/mm <sup>2</sup>
Flexural Strength (ASTM C348) After 2 hours After 28 days	1.6 N/mm <sup>2</sup> 8.5 N/mm <sup>2</sup>
Setting Time @25°C	60 sec
Noxiousity	None

\*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

## Coverage:

HYDROPLUG mixture of 2.0 kg achieves 1 liter of wet mix.

\*Coverage rate is an approximate value, and subject to actual site conditions.

## Packaging:

Available in 5 Kg plastic bags.

## Storage:

Store in original packing in dry conditions away from direct sunlight and high humidity levels.

## Shelf Life:

HYDROPLUG can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

## Cleaning:

Clean all tools with clean water before product hardens. Hardened materials can only be removed mechanically.

## Health and Safety:

- Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapour or spray mist.

## FIRST AID:

Eyes: In the event of accidental splashes, flush with warm water and seek medical advice.

Skin: Wash skin thoroughly with soap and water

Inhalation: Remove to fresh air, keep patient rested

Ingestion: Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to HYDROPLUG Material Safety Data Sheet.

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