

Description:

TechFin®FastPlug is a pre-bagged, factory quality controlled, easy to apply single component rapid setting waterproof plugging mortar which is ready for on-site application to leaking cracks and water seepage areas in concrete and all types of masonry after mixing with water. **TechFin®FastPlug** is slightly expansive and does not shrink, starts hardening in few seconds and sets within three to five minutes depending on the temperature.

TechFin®FastPlug incorporates of a blend of hydraulic cements, supplementary cementing materials & advanced polymer additives which requires the addition of recommended potable water on site to produce a highly consistent, rapid setting mortar which is easy to apply in many difficult conditions. It contains no chlorides or other admixtures which could promote corrosion of reinforcing steel or pre stressing steel cables.

Application Includes:

When mixed with water, **TechFin®FastPlug** can be used to stop leaking water in:

- Stopping active water leaks and seepage, even under high pressure, trough joints, cracks, honeycombing and holes in all structures made out of concrete, masonry, stone and cement based renders.
- As a preparation before waterproofing injections or before application of waterproofing coatings.
- Applications include plugging in-situ and precast concrete segments in tunnels, water storage tanks, sewerage mains and processing tanks, basements, below ground car parks, access chambers, building foundations and mines.

Features & Benefits:

- **Durable-** Chloride-free, will not promote corrosion of reinforcement. Expands as it sets to ensure a permanent watertight seal. Mechanical characteristics similar to concrete.
- **Cost effective-** Ultra-rapid setting for instant leak plugging, Blocks water and no injection equipment required.
- **Easy to apply-** Only to be mixed with water.
- **Environmentally friendly-** Cement based, contains no toxic elements.

Application Instructions:

Surface Preparation

The substrate has to be free from dirt, grease, laitance, loose concrete, loose particles or layers which could adversely affect adhesion. Remove all damaged concrete and prepare substrate by sand or grid blasting, high pressure water jetting, or other methods until base concrete is exposed, offering sufficient roughness (bond) and open pores. Cracks and holes should be cut out to a minimum width and depth of 20mm. The substrate must be thoroughly pre-wetted with clean water until the substrate is saturated.

Mixing:

TechFin®FastPlug need to be mixed manually with clean water until a putty consistency is achieved. Mixing time is about 30-60 seconds. Approximate mixing ratio by volume is: 1:4 (Add 1 part water to 4 parts powder). Do not mix more than can be placed in 2 minutes. Setting time is dependent mainly on the amount of mixing water used and temperature of water. In cold weather, use lukewarm or heated water, in higher temperatures, use cold water. To avoid wastage, only small quantities of **TechFin®FastPlug** should be mixed. Do not retemper material after initial mixing.

Application & Finishing

Pre-dampen the substrate prior to installing **TechFin®FastPlug**. Place **TechFin®FastPlug** with minimum working, kneading, or rubbing. Force **TechFin®FastPlug** repair mortar into cracks or holes and hold in place (without twisting) until set is fully achieved. Just prior to final hard set, **TechFin®FastPlug** may be "shaved" with a trowel until flush with the surrounding surface. Always shave from the center out, in the direction of the bond line. If the repair area is dry at the time of placement, keep substrate damp for 15 minutes minimum, using a fine spray misting of water, before and after placement.

Typical Properties at 25°C

Appearance	Cement Grey powder
Initial setting time	45 seconds (after mixing)
Final setting time	2-3 minutes
Physical or chemical change	Chemical cure
Density	1.10 - 1.30 kg / L
pH - Value	11 - 13.5
Compressive strength (ASTM C109)	≥ 30 MPa @ 7days @20°C. ≥ 35 MPa @ 28 days @20°C
Mix proportions by volume	1 part water : 3 parts of powder
Recommended application temperature	10 to 30°C

Packaging:

TechFin®FastPlug is supplied in 30 Kg HDPE Bag.

Cleaning:

TechFin®FastPlug should be removed from tools, equipment and mixers with clean water prior to the initial set. Cured material can only be removed mechanically.

Storage & Shelf Life:

12 months from the date of manufacturing when stored in unopened, original sealed and dry condition at a temperature range from +10°C to 30°C.

Health & Safety Instructions:

As a powder containing Portland cement **TechFin®FastPlug** may cause irritation to skin or eyes. Protect your health while working with this material, always use safety goggles, gloves and safety clothing. When handling hazardous materials or pressurized materials, or during any application that may result in spills, splashes or airborne particles, a full face shield is strongly recommended. Protect yourself and others on the jobsite.

Consider property in proximity of the application area to prevent loss or damage. Protect your jobsite from unauthorized persons. Store all materials and equipment safely and out of reach of children and animals.

Observe container labels, SDS, applicable laws and regulations and all instructions before using the product and equipment. In case one of the components comes in contact with the skin, wash thoroughly with soap and water. Provide adequate ventilation in volume and pattern in working area.

Disclaimer: The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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Stopping/running water

To stop active water from running through concrete and masonry, cut out crack or hole to a minimum depth and width of 20mm. Always square cut or undercut when possible; do not "V" cut. Start at top and force **TechFin®FastPlug** into crack. In areas of great pressure, do not place **TechFin®FastPlug** into opening immediately.

Hold **TechFin®FastPlug** in hand or on trowel until a slight warming occurs. Then press **TechFin®FastPlug** firmly into opening.

Do not remove trowel or hand pressure too soon so as to provide some confinement to **TechFin®FastPlug** expansion during its set. Do not twist **TechFin®FastPlug** during placement or disturb during set time (5 minutes). After placement to stop the active water flow, carefully cut and "trowel shave" the patch level with the surrounding surface.

Sealing junctions

To seal static cracks at the junction of floors and walls, rout or cut out the crack at least 20 mm wide and deep, slightly undercutting if possible. Flush away all loose debris, dust, and dirt with clean water. Force **TechFin®FastPlug** into the prepared crack with a round tool or margin trowel until a set is fully achieved and smooth out to form a cove at wall-to-floor junctions. Keep damp for at least 15 minutes.

Sealing leaks in joints and cracks

To stop leaking mortar joints or static cracks in below-grade masonry and concrete walls, cut out defective mortar joints or cracks to a minimum width and depth of 20mm. Undercut when possible. Force **TechFin®FastPlug** into opening and keep damp for at least 15 minutes or until a set is fully achieved.

Repairing construction faults

For patching holes and voids, etc., in concrete walls, remove all tie wires and wood or steel separators by cutting back from surface to a minimum depth of 20mm. When there is no active water present, repair mortars may be used more appropriately.

Anchoring Hardware

To anchor steel bolts or posts in vertical concrete or masonry, drill a hole deep enough to properly secure bolt or post and large enough so there is at least ½" (13 mm) on all sides of bolt or post. Fill hole with **TechFin®FastPlug** and tamp so that entire hole is full.

Immediately center bolt or post over hole and force into the putty-like **TechFin®FastPlug**. Tamp **TechFin®FastPlug** firmly around bolt or post; keep continuously moist for 15 minutes. Apply no pressure or stress to bolt or post for a minimum of 5 hours after placement.

Limitations

- Do not apply the product at temperature less than +10°C.
- Do not apply to frozen or frost-covered surfaces.
- Do not apply to dynamic (moving) cracks.
- Do not use to fill expansion joints or control joints.
- Do not retemper hardened material.
- Do not use as a surface-applied coating or as a parging material.

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