

**Waterproofing Systems / Capillary Waterproofing Systems**

# AQUAFIX EXPAN

**High Strength Shrinkage Compensated Structural Waterproofing Repair Mortar****DESCRIPTION**

Cement-based, **crystallized** and **non-shrinking structural repair mortar** used for filling rod holes, chamfering and segregation repairs on concrete surfaces that gains high strength in a short time and provides water impermeability with the active chemicals it contains. It is resistant to both **positive** and **negative** hydrostatic pressure. Thanks to its reactive feature, it provides waterproofing on the concrete surfaces on which it is applied throughout the service life of the structure.

**APPLICATION AREAS**

- Repairing all kinds of concrete in contact with water,
- Filling around rod holes and crossties,
- Repairs requiring early and high strength,
- Repairing segregated curtain concrete,
- Horizontal and vertical cold joint repairs and chamfering applications,
- Filling the gaps formed between old and new concrete,
- Filling the core gaps,

**TECHNICAL PROPERTIES**

<b>Appearance</b>	Grey colored fine powder
<b>Powder Density</b>	~ 1.35 kg/L
<b>Water Mixing Ratio</b>	2.8 L water / 20 kg powder
<b>Resting Period</b>	5 – 10 minutes
<b>Pot Life</b>	30 – 45 minutes
<b>Application Temperature</b>	Between +5°C and +35°C
<b>Compressive Strength</b>	1 day: $\geq 20$ N/mm <sup>2</sup> (EN 12190) 7 day: $\geq 30$ N/mm <sup>2</sup> (EN 12190) 28 day: $\geq 50$ N/mm <sup>2</sup> (EN 12190)
<b>Setting Time</b>	~ 40 minutes
<b>Curing Time</b>	2 – 3 days

**ADVANTAGES**

- Does not shrink, has a thixotropic consistency.
- Used both in structural repairment and waterproofing.
- Used on shear walls, chamfering applications and filling rod holes that require waterproofing, completely fills fine cavities with its self-setting feature.
- Does not require primer.
- Provides early high compressive strength.
- Resistant to impacts and vibrations.
- Provides high adherence to concrete and reinforcement.
- Does not separate from repaired parts.
- Saves time in multi-length works as it is cured fast.
- Is reactive, reaction starts when it is in contact with water and moisture, it provides continuous waterproofing.
- Only mixed with water, easy to apply. Surface leveling is easy, provides surface integrity.
- Does not segregate.

**CONSUMPTION**

Approximately 10 liters of mortar is obtained with 20 kg of AQUAFIX EXPAN.

**PACKAGING**

20 kg craft bags

## APPLICATION

**PREPARATION OF THE SURFACE**

- The surface must be clear of weakly adhered parts and dust, oil, tar, bitumen, paint, silicone, curing material, detergent and mold oils that prevent penetration.
- Saturate the surface with moisture, remove the excess water ponding from surface.
- It is recommended that the edges of the area to be repaired to have upright corners such as square or rectangular. Avoid sharp and narrow angles, as well as zigzag corners, as they cause shrinkage stress and cracks, and roughen the surface slightly to allow the material to adhere.

**PREPARATION OF THE MORTAR**

Add slowly 20 kg AQUAFIX EXPAN powder to 2.8 L of water and mix with a 400 – 600 rpm mixer for 3 – 5 minutes until there are no lumps. Leave the mixture to rest for 1 – 2 minutes and mix again before use.

**APPLICATION**

- For application to the rod holes, remove the plastic pipes inside the holes with a drill and wash the inside of the hole with water and remove the dust. Then fill the mortar into the holes by hand.
- If a hyssop is used, open the surface around the hyssop which is cut zero to the concrete surface 3 cm inwards and sideways and wash with water. Fill the mortar into the opened area by hand.
- In all horizontal and vertical cold joints, break the joints with a breaker and wash with water. Chamfer horizontally and vertically when the surface is damp.
- If there are deep segregations on the concrete surface, break these areas to make the corners vertical and clean with water, repair by filling with a trowel while damp.
- Open the cracks wider than 0.5 mm in concrete with perpendicular corners, wash with water and fill with AQUAFIX EXPAN while the surface is damp.
- Active chemicals that react and form crystals while curing will provide waterproofing in the areas where it is applied.

**CAUTION**

- Avoid application in temperatures under +5°C and above +35°C.
- Be cautious with the amount of water. Use a low rpm drill, do not mix manually.
- Saturate the surface with water avoiding water ponds.
- Avoid application in frozen areas, areas where there is a risk of freezing within 24 hours or open to direct sun and wind.
- Do not add powder and water to the expired mortar.
- Cure with water for 2 – 3 days following the application.

**SHELF LIFE**

Expires in 12 months. Store unopened packages in dry environments, stacked maximum 10 on a pallet.

**HEALTH AND SAFETY**

As with all chemical products, avoid contact with food, skin, eyes and mouth during usage and storage. During the application, use work clothes, protective gloves, goggles and mask in accordance with the occupational and worker health regulations. Consult a doctor if accidentally swallowed. In case of contact with skin, rinse with water. Keep out of reach of children.

\* The application instructions and technical values given for the products have been obtained in our tests in accordance with international standards and our experience, at  $23 \pm 2^{\circ}\text{C}$  temperature and  $50 \pm 5\%$  relative humidity. These values may vary depending on ambient conditions. High temperatures shorten the durations, low temperatures extend them. Before starting the application, whether the product is suitable for the application and purpose should be tested by the user. FIXA Construction Chemicals is not responsible for application errors that may occur if the product is used outside of its intended purpose or if the application conditions and recommendations mentioned above are not followed. This Technical Data Sheet is valid until the next revision is published. FIXA reserves the right to change the values specified in this Technical Data Sheet, provided that a new version is published. It is the user's responsibility to check the currency of the document. For more information, please contact our sales department.