

mart-FR MORTAR 30mm

POLYMER MODIFIED FIBRE REINFORCED CONCRETE REPAIR MORTAR

DESCRIPTION

mart- FR Mortar 30mm is a polymer modified fibre reinforced concrete repair mortar designed for structural concrete repairs, such as honeycombed, spalled and damaged concrete. Suitable for applications up to 30 mm thick on vertical and overhead substrates.

CHARACTERISTICS/ADVANTAGES

- Easy to use, just add clean water.
- Superb placing and finishing characteristics.
- Very low permeability protects steel and resists carbonation and chloride attack.
- Can be built up in layers up to 30mm.
- Non-corrosive, will not attack reinforcement.
- Excellent adhesion to concrete.
- Shrinkage compensated, minimising tendency of repairs to crack and allow ingress of water and chlorides, especially in harsh environments.
- Structural concrete repairs.

TYPICAL USES

- Structural repair.
 - Industrial buildings.
 - Water-retaining structures.
 - Sewage and effluent concrete systems.
 - Tunnels.
 - Precast Concrete elements & Concrete pipes.
 - Concrete columns, Beams & Soffits.
- Suitable for interior and exterior applications.

PRODUCT DATA

- **Appearance:** Powder
- **Colour:** Grey
- **Packaging:** 25 kg plastic lined polypropylene bags
- **Coverage:** 1 bag of mart-FR Mortar 30 mm mixed with 3.5-4lt water will yield approximately 11-12lt of mortar
- **Storage Condition:** Store in a dry cool area, temperature between 5 - 25°C
- **Shelf Life:** 12 months from date of manufacture..

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APPLICATION PROCEDURE

Surface Preparation:

- Concrete surface must be structurally sound and fully cured.
- Surface must be clean, free of oil & grease, dirt, dust & other foreign material.
- Remove all loose concrete & cement laitance.
- Any cracked or loose concrete should be repaired under separate application
- Square cut all edges of the repair to a minimum depth of 10 mm deep.
- Repair areas must have an exposed aggregate surface.
- Non-impact cleaning method should be used to expose the area and clean all reinforcing steel to remove all corrosion.
- All prepared areas for application should be thoroughly soaked with clean water prior to application.
- All ponding water should be removed prior to application.

Mixing:

- Use cool, clean water, clean tools and clean containers.
- Add 3.5 – 4lt of cool water into the clean container.
- Mixing with a mechanical mixer at a slow speed not exceeding 500 rpm, start adding mart-FR Mortar 30 mm slowly whilst mixing.
- Normal mixing time minimum 3 – 5 minutes. Mix to a uniform lump free consistency.
- Mix so as to entrain as little air as possible.
- Mixed material should stand for 1 – 2 minutes and remix without adding water before application.
- mart-Keybond can be added to the mixing water for better adhesion and where water repellence is needed.
- It is recommended to use builders or rubber gloves due to the high alkalinity of the product.

Priming:

- No priming necessary for concrete surface dressing
- mart-WD 6 (wet to dry) should be used for all structural repairs. (*Note: Wet to dry epoxy used for all water retaining structures and submerged water applications*)
- mart-Keybond can be used as bonding agent for non-structural repairs.

Application:

- Concrete must still be fully saturated.
- mart-FR Mortar 30 mm must be applied by trowel.
- Repair areas should be square cut, **do not** feather edge the product.
- During build up of mart-FR 30 ensure that all repair layers are complete before final set of the product in the next to last layer.
- If final set has occurred, mart-Keybond for non-structural repairs or mart-WD 6 for structural repairs must be used for bonding between layers.
- Mart-FR Mortar 30mm can be used for repairs up to 50mm, water content must be lower to obtain a stiffer stronger mix.
- On overhead applications, do not exceed 25mm per layer.
- For localised and minor voids, a pallet knife can be used.

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CURING

- Curing is an essential part of achieving crack free repair.
- Repaired areas should be covered as soon as possible.
- Normal concrete curing processes should be adhered to.

LIMITATIONS

- Maximum of 4lt of water, do not exceed this
- Mix only the required amount of mart- FR Mortar 30mm that can be placed within 10 minutes.
- Any product not used within 45 minutes should be discarded. **DO NOT REMIX WITH ADDITIONAL WATER.**
- Ambient temperature should not be below 5°C during application.

CLEANING AND STORAGE

- Wet product can be cleaned off equipment with water and soap.
- Store in a cool dry place.
- 12-month Shelf life from date of manufacturing if kept in the original packaging and stored appropriately.

PACKAGING

mart-FR Mortar 30mm comes in a 25kg plastic lined polypropylene bag.

HEALTH AND SAFETY

In all cases, consult the Material Safety Data Sheet before use.

Do not breathe dust. In case of inadequate ventilation wear respiratory protection. Wear protective gloves/ protective clothing/ eye protection. Wash face, hands and any exposed skin thoroughly after handling. For further health and safety information refer to the product MSDS.



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TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Type of repair mix	Structural repair
Mix Ratio	3.5 – 4lt of water per 25kg bag
Ambient temperature at mixing	25°C
Yield	11-12lt
Horizontal Max Thickness (with lower water)	50mm max built up to 30mm layers
Overhead Max Thickness	25mm
Working temperature	Between 5°C and 35°C
Compressive Strengths (3.5lt water dosage per bag)	
1 days	≥ 16MPa
7 days	≥ 34MPa
28 days	≥ 45MPa
SANS 50196 - 1	
Adhesion (28Days) (3.5lt water dosage per bag)	≥ 1.7Mpa
Capillary absorption (3.5lt water dosage per bag)	≤ 0.6kg/m ² h0.5

Disclaimer: The information contained in this document is given to the best of Mart Solutions' knowledge and is the result of extensive testing. However, this document will not under any circumstances be considered as a warranty involving Mart Solutions' liability in case of misuse. Tests should be carried out before any use of the product to ensure that the methods and conditions of use of the product are satisfactory. Mart Solutions specialists are at the disposal of the users in order to help them with any problems encountered.