

mart-RS MORTAR

RAPID SETTING POLYMER MODIFIED CONCRETE REPAIR MORTAR

DESCRIPTION

mart-RS Mortar, rapid setting concrete repair mortar, designed for repairs where rapid setting is required. Ideal for honeycombed, spalled and damaged concrete. **mart-Rapid set** can be used for patch repairs.

CHARACTERISTICS/ADVANTAGES

- Premixed and ready to use (just add clean water).
- Low permeability protects steel and resists carbonation and chloride attack.
- Non-bleeding.
- Very good placing and finishing characteristics.
- Excellent high early and initial strengths.
- Suitable for structural and non-structural repairs.
- Shrinkage compensated - Minimizes tendency of repairs to crack and allow ingress of water and chlorides, especially in harsh environments.
- 5mm to 40mm Horizontal repairs dependent on repair size geometry.
- 5mm to 30mm Vertical repairs dependent on repair size geometry.
- Overhanging areas, layers of 20mm, several layers can be applied in quick succession, layers should be allowed to obtain initial set before next layer is applied. Layer can be scratch and allowed to dry overnight before next layer.
- Trafficable in 2 – 4 hours depending on ambient conditions would be a suitable time frame.

TYPICAL USES

mart-RS Mortar is versatile and can be used on most concrete structures.

- Industrial buildings
- Water retaining structures
- Effluent concrete systems
- Smaller patching of concrete floors
- Concrete tunnels, pipes and columns

PRODUCT DATA

- **Appearance:** Powder
- **Colour:** Grey
- **Coverage:** 1 bag of **mart-RS Mortar** mixed with 4.5 lt of clean mixing water will yield 11.5 lt of mortar.
- **Packaging:** 25kg plastic lined polypropylene bags.
- **Shelf Life:** 12 months in original unopened bags, when store in the correct storage conditions.
- **Storage Condition:** Store in a dry cool area, temperature between 5 - 25°C.



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APPLICATION PROCEDURE

Surface Preparation:

- Concrete surface must be structurally sound, fully cured (28 days)
- Thoroughly clean all surfaces and substrates of chemical deposits, dirt, grease, form oils, efflorescence, paint, or other contaminants that could interfere with bonding.
- Remove all loose concrete & cement laitance.
- All prepared areas for application should be thoroughly soaked with clean water prior to application.
- All ponding water should be removed prior to application.

Structural Repair:

- Where reinforcement is exposed all rust, scale must be removed.
- Rusted reinforcement should be coated with **mart-Primer ZR** after cleaning.
- Sufficient concrete should be removed around full circumference of reinforcement to allow application of **mart-Primer ZR**.
- Absolute minimum of 25mm cover of **mart-RS Mortar** over reinforcement.
- Concrete should be roughened sufficiently to provide a proper mechanical bond.
- Prime with **mart-Bond 6** Wet to Dry Epoxy Adhesive (refer to TDS for application).

Non-structural Repair:

- Concrete should be roughened sufficiently to provide a proper mechanical bond.
- Prime with **mart-Keybond** (refer to TDS for application).

Mixing:

- Use cool, clean water, clean tools and clean containers.
- Add 2/3 (3 lt) of required water into the clean container.
- Mixing with a mechanical mixer at a slow speed, start adding **mart-RS Mortar** slowly whilst mixing.
- Add remaining water (1.5 – 1.75 lt) in small increments until desired consistency is achieved
- Mix to a uniform lump free consistency minimum 2 – 3 minutes.
- For repairs of 40mm thickness, a lower dosage of water is recommended.
- Warmer temperatures will reduce the working time. The addition of cold water at high temperatures, will aid in adjusting the mix temperature.
- Hand or manual mixing is not suggested, where no other option is available, 10kg of **mart-RS Mortar** with 1.8lt of water can be mixed, mix vigorously,
- Do not re-temper or add water once the material has started to set.
- Increasing the water content will result in lower final strengths.

Placing & Application:

- Avoid application in direct sunlight.
- Always apply to a pre-dampened surface. High suction substrates require more dampening than dense substrates. However, there must be no pooled water on the surface before product application.
- **Prime prepared area with mart-Keybond (non-structural), mart-WD 6 (structural) repair. Whilst primer is still tacky, apply mart-RS Mortar**
- **Work a scraper coat of mixed material into the primed substrate applying enough pressure to ensure all deep cavities and whole surface to be repaired is covered.**
- **Compact and smooth area with a trowel.**
- Mixed material must be used within 20 minutes or less depending on ambient weather conditions.

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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.

CLEANING

- Use soapy water to clean hands and tools immediately after use.
- Dried material can be removed mechanically.

LIMITATIONS

- Store unopened bags in dry, cool out of direct sunlight
- Do not mix more than 4.5lt of water with **mart-RS Mortar**, overwatering may cause shrinking and cracking.
- Mix only the required amount which can be placed within 10minutes.
- Do not apply if temperature is below 5°C.
- Do not add admixtures, cement, or sand to the product.
- Proper curing is required.

MECHANICAL/PHYSICAL PROPERTIES

Type of Repair Mix	Structural Repair Mortar
Mix Ratio	4.5 – 4.75 L
Ambient temperature at mixing	25°C
Recommended working temperature	5°C and 35°C
Yield depending on water dosage	Approx. 11- 12.5lt
Horizontal Max Thickness with lower water content	40mm per layer
Vertical Max Thickness with lower water content	30mm per layer
Overhead Max Thickness	20mm
Compressive Strengths SANS 50196 - 1	≥ 10 Mpa, 1 Day ≥ 20 Mpa, 7 Days ≥ 40 Mpa, 28 Days
Adhesion (28 days) at 4.5l water dosage per bag	≥1.7 Mpa

HEALTH AND SAFETY

In all cases, consult the 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 SDS.

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