PRODUCT DATA SHEET

weberep rapifast HY

(Formerly known as E.MIX RAPIFAST HY)

Ultra-rapid setting high strength concrete repair for roads and floors.

PRODUCT

weberep rapifast HY is a polymer-modified mortar with rapid strength development for concrete repairing. It is formulated to provide high early strength materials for patching and repairing concrete and masonry surfaces. **weberep rapifast HY** develops high compressive strength within few hours, and allows bearing loading with minimum down time.

Uses

- Repair of highways, roads, car park driveways and ramps
- Repair of manholes and potholes setting
- Repair of industrial floor decks, loading bays, bridge decks and expansion joints
- Pavements and floor screeds
- Other uses which minimizing repair time is of prime importance

Features and Benefits

- Formulated to comply with Hong Kong Standard and British Standard
- Can be applied up to 100 mm in one layer
- Rapid development of compression strength : > 20 MPa in 2 hours
- Single component : fixed mixing proportion, easy to handle for repair works
- Shrinkage compensated : reduce the chance of shrinkage cracks
- Monolithic bond adhesion and compatible to parent concrete
- Self-compacted : avoid honeycombing and voids
- Durable : can be used in interior and exterior areas
- Pourable and highly workable
- Conventional concreting or plastering techniques required
- No chloride content

TECHNICAL DATA

Colour	Grey (similar to concrete)
Component	Portland cement, fast setting cement, reinforcement fibre, non-reactive aggregate, graded sand, polymer powder and other chemical additives
Max. aggregate size	4.5 mm
Water demand	Approx. 14 – 16% (3.5 – 4.0 L/25 KG bag)
Density	1.6 kg /L (dry) 2.2 kg/L (wet) for 15% water demand
Pot life	Approx. 10 – 15 minutes, depending on the temperature and humidity
Initial setting time	Approx. 20 minutes, depending on the temperature and humidity

SAINT-GOBAIN

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Thickness	6 – 100 mm
Coverage	Approx. 1.88 kg/m^2/mm
Theoretical consumption	Approx. 75 bags/m^3
Extra Aggregate	For thickness > 25 mm, max. 40% of 5 – 10 mm aggregate can be added

PHYSICAL PROPERTIES

Compressive strength	BS 6319 ・ 2 hours ・ 3 hours ・ 1 day ・ 7 days ・ 28 days	 > 21 N/mm^2 > 30 N/mm^2 > 40 N/mm^2 > 55 N/mm^2 > 63 N/mm^2
Adhesive strength	BS 6319 HKHA MTS(2002/2004) Spec. Part D, Cl. 2.1.15	> 1.0 N/mm^2
Shrinkage	Coutinho ring HKHA MTS(2002/2004) Spec. Part D, Cl. 2.1.6	No crack observed
Coefficient of Thermal Expansion at 25°C		15.5 x 10^{-6} / K
Slant shear bond strength	BS 6319 ・ 7 days ・ 28 days	 > 28 Mpa > 33 MPa

Unless specified, all technical data are average values and refer to 28 days curing time.

Above physical data are taken on laboratory tests. In situ material performance may vary according to environmental & workmanship conditions beyond manufacturer control.

Complied Standards

Hong Kong Standard : HKHA MTS(2002/2004 Spec. Part D, Cl. 2.1.1 – 2.1.7)
British Standard : BS 6319

PROCEDURE

Preparation

Concrete substrates must be clean and structurally sound, free from contamination, loose particles, dirt, grease, oil, sealers, curing compounds and laitance, etc.

Any exposed reinforcement should be cleaned and free of rust or corrosion.

Before application, dampen the concrete surface with clean water and allow excess to drain away.

To patch irregular cracks and holes, it is highly recommended to cut the repairing area into regular shape.

Priming

Before application, dampen the concrete surface with clean water and allow excess water to drain away.

Prepare the bond coat slurry by mixing **webertec bond coat** or **webertec EVA** with Ordinary Portland Cement (OPC) at a ratio of 1:1 (by weight). Stir the mixture thoroughly by using an electrical mixer until a wet and sticky slurry coat is obtained.

Bond coat slurry can be applied by brushing on the concrete surface. Subsequent installation of mortar should be applied on wet and sticky slurry coat.

For steel reinforcement, a layer of bond coat slurry can be applied by brushing on the exposed steel surface. Allow it to dry before the next installation. A new coat of bond coat slurry should be applied again before subsequent installation of mortar.

Mixing and Installation

weberep rapifast HY is formulated for easy and simple mixing and application, using conventional concreting or plastering techniques.

Fast applying is essential for installation of **weberep rapifast HY**. It is a fast setting mortar, and preferable to be mixed adjacent to the repair area.

Mix a bag of dry-mixed powder (25 KG) with approx. 14 – 16% (3.5 – 4.0 L) of water by using an electrical mixer for 3 – 5 minutes.

Mix thoroughly until the material is homogeneous and in the desired workability, **weberep rapifast HY** can be installed.

Apply **weberep rapifast HY** on the slurry coat while the slurry coat is still wet and sticky.

If the slurry coat dries, it must be thoroughly re-applied.

Mix an appropriate amount of material, which can be applied within 15 minutes.

weberep rapifast HY can be applied in one layer with maximum thickness of 100 mm.

Repair area should be perfectly casted with **weberep rapifast HY** in one time. Otherwise, it should be applied in successive layers with maximum thickness of 100 mm.

Finish the surface by using steel, plastic, wood float, or damp sponge, to achieve the required surface texture. The completed surface should not be overworked.

When the material starts to set, do not re-mix or re-temper, as this will weaken the desired strength of the product.

Please refer to our method statement for procedures in details.

Curing

weberep rapifast HY can be cured with wet hessian, polyethylene or spray-on curing compound.

STORAGE AND PACKING

weberep rapifast HY is delivered in 25 kg bag. Storage life is 9 months if the product is kept in a dry place.

HEALTH AND SAFETY

Recommend to wear NIOSH approved or equivalent particulate face mask when mixing the material.

Material contains cement, which may produce an allergic effect.

Keep out of reach of children

Material may cause irritation to eyes and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical assistance. After contact with skin, wash immediately with plenty of soap and water.

Please refer to Material Safety Data Sheet (MSDS) for health, safety and handling of the product.

* Note: The information and physical data in this catalogue is given to the best of our knowledge under standard testing method and controlled environment. The results may vary with different weather / site conditions, workmanship or substrates. This is beyond our control that we shall not be liable for any faults or consequences arising or associated with this. We suggest comprehensive tests to be conducted before final application. Unless specified, all technical data are average values with curing time of 28 days. We reserve the right to update or amend the contents in the light of new findings during the course of research and development.