



奧迪美®

RM780

REPAIR MORTAR (RAPID SETTING)

PCCS-RM CLASS S VERSATILE HIGH STRENGTH MORTAR (20MPa @ 2h)

PRODUCT DESCRIPTION

OPTIMIX RM780 REPAIR MORTAR (RAPID SETTING) is a high quality pre-mixed, shrinkage-compensated fast-setting mortar. It has an extended working time yet ultra-rapid strength gain for speedy repair, reinstatement or renovation purposes. RM780 is certified as PCCS-RM Class S compliant.

As a single pack requiring only a measured addition of water, it is easy to achieve a trowellable or flowable consistency for quick and efficient placement and finishing.

Plus it can be mixed with graded aggregates to produce concrete of high early strength.



TYPICAL USAGE

- For emergency reinstatement of damaged concrete floor.
- Repair of heavy traffic locations where downtime is critical.
- Runway, rail, apron, main entrance, roadwork, highway, pavement, etc.
- Suitable for applications on damp substrate.
- For internal and external applications.
- Replacement for the traditional toxic polyester resin based repair material.
- If aggregate filler is required, it is recommended to be used with **OPTIMIX 10mm Aggregate**.

FEATURES AND BENEFITS

- Cost Effective & Easy to Use
- High Early and Ultimate Strength
- Rapid Set
- Extended Working Time
- Waterproofing Properties
- Low Shrinkage
- Good Bonding to Substrate
- PCCS-RM Class S Compliant
- Extremely Low VOC
- Consistent Quality

TECHNICAL DATA

Product Characteristics ¹⁾	Test Method	OPTIMIX RM780	OPTIMIX RM780 + 10kg Aggregate
Compressive Strength at 2 hours (MPa)	BS 6319: Part 2	≥ 20	~ 24
Compressive Strength at 1 day (MPa)		≥ 35	~ 40
Compressive Strength at 28 days (MPa)		~ 70	~ 75
PCCS-RM Class S Specification (MPa) ²⁾	-	F _{cu} 60	-
Shrinkage at 28 days	Coutinho Ring	No Cracks	
Workability (Flowable)	BS 8204:7	> 200 mm	
Workability (Trowellable)	ASTM C1437	> 160 mm	
Setting Time (Initial)	ASTM C403-92	~ 30 minutes	
Setting Time (Final)		~ 50 minutes	
Re-open Time (Vehicle Traffic)	-	~ 2 hours	
Re-open Time (Foot Traffic)	-	~ 1 hour	
Initial Surface Absorption Test (ISAT at 28 days)	BS 1881	120 minutes: 0.009 ml/m ² ·s	
Pot Life at 25°C	-	~ 20 minutes	

Mixing	Test Method	OPTIMIX RM780	
Water Demand	-	(Trowellable) 3.0 – 3.5 L (Flowable)	
Wet Density	BS EN 1015 : Part 6	~ 2,200 kg/m ³	~ 2,300 kg/m ³

Packaging & Yield ³⁾	OPTIMIX RM780	OPTIMIX RM780 + 10kg Aggregate
Yield (per bag)	~ 13 L	~ 16.5 L
Packaging (per bag)	25 kg	25kg + 10kg
Shelf Life	6 months	

Environmental Data	
Volatile Organic Compounds (VOC) (USEPA Method 24)	≤ 10 g/L
Potential BEAM points	Product is manufactured within 800km of Hong Kong project sites
Packaging Composition	Paper bags incorporating 40% recycled paper

- 1) The results given here are typical laboratory results. Determined performance can vary slightly due to variations in equipment, users, substrates, ambient conditions etc.
- 2) F_{cu} is the characteristic strength of parent concrete on which RM780 should be used according to the HKCI PCCS-RM certification scheme.
- 3) These are approximate figures and take no account of wastage



INSTALLATION GUIDE

(Refer to Method Statement for more details)

SURFACE PREPARATION

Break out the repair area to a depth of at least 10mm. Expose and remove all loose rust from any corroded reinforcement that is present. Apply **OPTIMIX PE Polymer Emulsion** cement slurry primer (PE : Cement = 1 : 1.5) to the cleaned reinforcement and allow to dry.

Concrete substrate should be soaked with potable water to saturated surface dry conditions, and excess water should be removed.

To improve bonding, **OPTIMIX SF80 Primer** can be used to pre-treat the substrate and allowed to dry before application of the mortar. Alternatively for ultimate bond performance and enhanced waterproofing apply **OPTIMIX PE Polymer Emulsion** cement slurry primer (PE : Cement = 1 : 1.5) to the entire area to be repaired and allow to dry or become tacky before installing the **OPTIMIX RM780**.

MIXING

Mix one bag of **OPTIMIX RM780** dry powder with specific amount of potable water to achieve the desired consistency. Mechanical mixing with pan mixer or slow speed drill fitted with a suitable paddle is recommended. The powder should be slowly added to the required amount of water and mixed for about 3 to 5 minutes or until a lump-free homogeneous mixture is achieved. If graded aggregates are required they can be added half way through the wet mixing.

When using graded aggregates the water demand may be a little different depending on the condition and fines content of the aggregates. **OPTIMIX 10mm Aggregates** are recommended due to their stable quality and low fines content.

APPLICATION

The mortar should be placed and finished within 20 minutes after mixing to ensure its fluidity and allow sufficient time for adjustment and closing the surface. Pay attention to site conditions because hotter temperatures will shorten the working time.

The mortar can normally be applied up to 50mm under a single application or 250mm with an addition of **OPTIMIX 10mm Aggregate** or equivalent proper graded aggregates.

FINISHING AND CURING

With the excellent water retention properties of **OPTIMIX RM780**, self-curing of the applied mortar is usually considered adequate. Water curing is only required under extremely hot conditions or when excessive rapid drying occurs.





LIMITATIONS

OPTIMIX RM780 is highly plasticised and rapid setting and so has limited working time;

- Only mix as much as can be installed and finished within its working time.

OPTIMIX RM780 can be extended with an addition of clean dry coarse aggregates, suitable aggregates are available from Optimix;

- Do not add additional sand.
- Do not add too much aggregate – we have found 10kg of clean dry 10mm aggregate to be ideal.
- Do not add aggregates that are too wet without adjusting the water addition to avoid overwatering.

In order to ensure best performance **OPTIMIX RM780** is designed to work in a narrow range of water additions;

- Do not add too much water, if bleeding occurs discard and remix with reduced water.
- Once it is mixed to the desired consistency do not add any additional water.

HEALTH AND SAFETY

OPTIMIX RM780 is alkaline in nature and can cause irritations to persons with sensitive skin. Avoid inhalation of dust and contact with skin and eyes. Wear suitable protective gloves and masks while handling the product. If contact with eyes, rinse immediately with plenty of clean water and seek medical advice. This product is non-toxic and is not flammable.

STORAGE

Store the products in a cool and dry place with the original unopened bags on pallets with plastic wrapping. Protect from direct sunlight, rainfall and exposure to high humidity conditions. Avoid excessive stacking of pallets. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging and reduce shelf life.