

PRODUCT DATA SHEET

Unicell® 25

PREBAGGED HIGH BUILD, WATERPROOF CLASS 25 REPAIR MORTAR

DESCRIPTION

Unicell® 25 is a prepacked vinyl acetate copolymer modified mortar requiring only the addition of clean water to produce a mortar suitable for concrete repair and rendering. The material conforms to the Hong Kong Housing Authority specification for Class 25 repair mortar system. The performance of the product is certified under the Hong Kong Concrete Institute (HKCI) Product Conformity Certification Scheme PCCS-RM : Class 25. It can be applied in thick section and is suitable for structural and non-structural application. Layers of 50 mm can be achieved depending upon substrate profile and technique. Greater thickness may be possible when applying material into pockets. Successive layers can be built up to achieve the required thickness once the previous layer has become firm.

USES

- Thick section concrete repairs to vertical and overhead surfaces
- Can be used internally and externally
- Structural and cosmetic repairs to buildings and bridges
- Reinstate damaged concrete and protect reinforcement

CHARACTERISTICS / ADVANTAGES

- Prebagged giving greater confidence
- Single pack requiring only the addition of water
- Easy to apply on overhead surfaces
- Easy to achieve smooth surface finish
- Suitable for structural repairs
- Low VOC
- Can contribute to LEED certification

PRODUCT INFORMATION

Packaging	18 kg bag
Appearance / Colour	Concrete grey
Shelf life	6 months from the date of production
Storage conditions	Stored properly in undamaged and unopened original sealed packaging. Protect from direct sunlight and frost.

Product Declaration

Characteristics For Repair Mortar (from PCCS-RM Cl. 5.1 Table 1)

Test Method	Test Description	Age at Test	PCCS-RM Specification (Class 25)	Unicell® 25 Typical Performance
TM1	Compressive Strength	28 days	20–40	30 MPa
TM2	Tensile Strength	7 days	≥ 1.5	2.7 MPa
TM3	Elastic Modulus	28 days	9–15	10 GPa
TM4	Bond Strength	7 days	≥ 1.5	2.2 MPa
TM5	Coutinho Ring	1–28 days	Nil	No Cracking
TM6	Figg Air Permeability	35 days	≥ 150	216 sec

*All of the above data complies with Product Conformity Certification Scheme.

TECHNICAL INFORMATION

Compressive Strength	Age at Test	Unicell® 25 Typical Performance	Test Method
	7 days	25 MPa	TM1
	28 days	30 MPa	TM1

Flexural Strength	Age at Test	Unicell® 25 Typical Performance	Test Method
	7 days	6.2 MPa	BS 6319 : Part 3 : 1983
	28 days	7.0 MPa	BS 6319 : Part 3 : 1983

Tensile Strength	Age at Test	Unicell® 25 Typical Performance	Test Method
	7 days	2.7 MPa	TM2
	28 days	3.0 MPa	TM2

Tensile Adhesion Strength	Age at Test	Unicell® 25 Typical Performance	Test Method
	7 days	2.2 MPa	TM4
	28 days	3.0 MPa	TM4

APPLICATION INFORMATION

Consumption	Approx. 66 bags/m ³	
Flowability	Approx. 60 %	(BS 4551 : Part 1 : 1998 cl.9)

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

For use as concrete repair

Surface Preparation

- All defective concrete should be removed to leave a sound substrate
- Loose rust and scale should be removed from exposed reinforcement
- Cut around the perimeter of the repair area to a minimum depth of 6 mm to avoid feather edges

Surface Priming

- Concrete surfaces to be primed must first be thoroughly wetted with clean water
- Mix the primer by the following ratio :
Unicell Primer : Cement = 1:1.5 by volume OR 1:2.0 by weight
- Prime the steel reinforcement and allow to become tacky
- Prime the steel reinforcement again and the previously dampened concrete surfaces

MIXING

Mix the whole bag of Unicell® 25 with 3.3–3.6 litres clean water to even consistency with the aid of a mechanical mixer.

APPLICATION

- Apply the well mixed Unicell® 25 mortar to the prepared and primed substrate before the primer coat dries
- Application thickness should be between 6–50 mm per layer
- Intermediate layers should be scratched or keyed and primed before the next layer is applied
- Finish the repair to the desired profile using steel trowel or wood float
- Allow the repair area to cure properly and consult with Sika technical department for curing method in severe conditions
- Minimum cover to reinforcement should be 10 mm

CLEANING OF EQUIPMENT

Clean all tools and application equipment with clean water immediately after use.

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet (MSDS) containing physical, ecological, toxicological and other safety-related data.

VOC DATA

< 10 g/litre when tested according to USEPA Method 24

LEGAL NOTES

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Product Data Sheet

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