BUILDING TRUST

PRODUCT DATA SHEET

Unicell® 40S

High Build Pre-bagged Polymer Modified Window Frame Waterproof Grout

DESCRIPTION

Unicell® 40S is a prepacked Vinyl Acetate Copolymer modified mortar requiring only the addition of clean water to produce a mortar suitable for filling window frame gaps and conforming to the Hong Kong Housing Authority specification for Class 40 mortar. It can be applied in thick section and is suitable for structural and non-structural applications.

CHARACTERISTICS / ADVANTAGES

- High build applications
- Simple to mix and apply
- Prepacked for control and convenience
- Suitable for structural applications
- Waterproof and water resistance
- Non-shrink (shrinkage compensated)
- Low VOC

USES

- Window frames
- Door frames
- Fire shutter frames

PRODUCT INFORMATION

Packaging	25 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 in dry conditions. Protect from direct sunlight and frost.
Product Declaration	**Characteristics For Repair Mortar (from HKHA Specification for Class 40 RMS)**

Test Method	Test Description	Age at Test	HKHA-RMS Specification (Class 40)	Unicell® 40S Typical Performance
TM1	Compressive Strength	28 days	30–60	> 40 MPa
TM2	Tensile Strength	7 days	≥ 2.0	> 2.0 MPa
TM3	Elastic Modulus	28 days	15–25	15–25 GPa
TM4	Bond Strength	7 days	≥ 2.0	> 2.0 MPa
TM5	Coutinho Ring	1 and 28 days	Nil	No Cracking
TM6	Figg Air Permeability	35 days	≥ 200	> 200 sec

TECHNICAL INFORMATION

Compressive Strength

Age at Test	Unicell® 40S Typical Performance	Test Method
7 days	> 30 MPa	TM1
28 days	> 40 MPa	TM1

Tensile Strength in Flexure

Age at Test	Unicell® 40S Typical Performance	Test Method
7 days	> 5.0 MPa	BS 6319 : Part 3 : 1983
28 days	> 6.0 MPa	BS 6319 : Part 3 : 1983

Tensile Strength

Age at Test	Unicell® 40S Typical Performance	Test Method
7 days	> 2.0 MPa	TM2
28 days	> 2.5 MPa	TM2

Shrinkage

Age at Test	Unicell® 40S Typical Performance	Test Method
1 & 28 days	No crack between 1 & 28 days	Coutinho Ring (TM6)

Tensile Adhesion Strength

Age at Test	Unicell® 40S Typical Performance	Test Method
7 days	> 2.0 MPa	TM4
28 days	> 2.5 MPa	TM4

Water Absorption

Age at Test	Unicell® 40S Typical Performance	Test Method
28 days	< 0.1 ml/m²/s @ 10 min	Initial Surface Absorption Test (BS 1881 : Part 208)
28 days	< 0.08 ml/m²/s @ 30 min	Initial Surface Absorption Test (BS 1881 : Part 208)
28 days	< 0.06 ml/m²/s @ 60 min	Initial Surface Absorption Test (BS 1881 : Part 208)
28 days	< 0.05 ml/m²/s @ 120 min	Initial Surface Absorption Test (BS 1881 : Part 208)

APPLICATION INFORMATION

Consumption	Approx. 67 bags/m³

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.

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.

SUBSTRATE QUALITY / PRE-TREATMENT

Remove all dust, loose material and laitence form the concrete surface.
Concrete surfaces should be thoroughly wetted with clean water before apply the Unicell® 40S mortar. For application thickness over 70 mm. Unicell® Primer is recommended prior to the application of Unicell® 40S mortar.

MIXING

Place the whole bag of powder in the mixing vessel and pour 3.5–4.5 litres of clean water in the powder. Mix until a homogenous workable mortar is achieved.

APPLICATION

Applied the well mixed Unicell® 40S mortar to the prepared and wetted concrete surface. Fill gap between the window frame and concrete surface by compacting the Unicell® 40S mortar firmly to fill all voids. Subject to ambient conditions, make good the mortar surfaces with steel trowel 2–3 hours after application.

CLEANING OF TOOLS

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

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.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability

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