KingPlast® WR100

Single-component, polymer-modified water-resistant cementitious plaster with integral hydrophobic protection.

DESCRIPTION

KingPlast WR100 is a single-component, polymer-modified, ready-to-use cementitious plaster with integral water-repellent (hydrophobic) protection. It is a factory blend of cement, graded sand, limestone, mineral aggregates, selected polymers, reinforcing fibres and a silicone-based hydrophobic admixture which, when mixed with clean water, produces a thixotropic mortar for plastering vertical and overhead surfaces.

The integral hydrophobation is distributed throughout the hardened plaster, reducing capillary water absorption and producing a durable, water-resistant matrix while retaining good water-vapour permeability. This limits the transport of water-soluble salts, reducing efflorescence and helping to protect embedded steel and host concrete.

APPLICATIONS

Water-resistant plastering and rendering of concrete and blockwork surfaces, internally and externally – particularly where protection against driving rain, capillary moisture and efflorescence is required, such as facades, plinths, parapets, basements and wet areas exposed to damp conditions.

ADVANTAGES

- Integral water repellency – reduces capillary water absorption throughout the plaster, not just at the surface.
- Reduces efflorescence and chloride absorption, protecting steel reinforcement and host concrete.
- Retains good water-vapour permeability – the substrate stays breathable.
- Shrinkage-controlled and highly resistant to alkalis.
- Thixotropic high build for vertical and overhead work; single component (add water only).
- Suitable for internal and external use; applied by trowel or spray.

STANDARDS

KingPlast WR100 complies with ASTM C150 Type I, ASTM C897 and application standard ASTM C926.

TECHNICAL PROPERTIES

Colour	White and grey (range of colours available)
Chemical basis	Polymer-modified cement with integral silicone hydrophobe
Fresh wet density	2.0 ± 0.1 kg/ltr
Maximum aggregate size	1 mm
Compressive strength	> 6 MPa @ 28 days
Water absorption	Low – integral hydrophobic matrix
Water-vapour permeability	Good (breathable)
Application thickness	2 – 25 mm per coat
Water demand	4.0 – 4.5 litres per 25 kg bag
Frost sensitivity	Not sensitive to frost

METHOD OF USE

Substrate Preparation

The substrate must be sound, clean and free from oil, grease, dust and laitance. Pre-wet the surface with clean water to a saturated surface-dry condition, leaving no standing water, before applying the plaster.

Priming

Normally no primer is required; pre-soaking the surface with clean water is sufficient. Where increased bond is required, or on smooth fair-faced surfaces, apply a suitable bonding primer or a dash / slurry coat before plastering. For guidance on bonding primers and dash coats, the KingKrete Technical Department can be consulted.

Mixing

Use a mechanically powered mixer or drill fitted with a suitable paddle. Add 4.0 – 4.5 litres of clean water per 25 kg bag to a clean container, then add the powder slowly to the water while mixing continuously at low speed (400 – 600 rpm). Continue mixing until a uniform, lump-free consistency is obtained.

Placing and Finishing

The suitable application thickness is 2 – 25 mm. Where greater thickness is required, apply a further layer wet-on-wet after the first has initially set (3 – 6 hours). Apply by trowel with firm pressure to fully compact the mortar and ensure good adhesion to the substrate. Level initially with a wooden or plastic float and finish with a slightly water-damped steel float.

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Spraying Application

KingPlast WR100 may be applied using suitable plaster spray equipment. The substrate must be clean and pre-wetted immediately before application; apply 2 – 25 mm in a single coat and smoothen the surface with a straight-edge tool.

Curing

As a cementitious material, KingPlast WR100 should be cured in the same manner as cement. Protect the fresh plaster from rapid drying, direct sunlight and wind, and water-cure 2 – 3 times per day during the first days after application. Because water repellency is integral to the plaster, no additional external water-repellent treatment is required to control efflorescence.

CLEANING

Clean all tools with fresh water immediately after use. Hardened material must be removed mechanically.

PACKAGING

KingPlast WR100 is available in 25 kg bags.

YIELD

Approximately 14.5 – 15.5 litres of mortar per 25 kg bag.

STORAGE

Shelf life is 12 months when stored unopened under cover, in cool, dry conditions, out of direct sunlight and protected from moisture and from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice, consult KingKrete's Technical Services Department.

HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with the eyes, mouth, skin and foodstuffs. Avoid inhalation of dust and wear suitable dust protection when handling. Treat any splashes to the eyes and skin immediately; if accidentally ingested, seek medical attention. Reseal containers after use and use in well-ventilated areas.

NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local KingKrete representative. KingKrete Inc. reserves the right to have the true cause of any difficulty determined by accepted test methods.

QUALITY AND CARE

All products originating from KingKrete's Middle East facility are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, ISO 14001 and ISO 45001.

* Properties listed are based on laboratory-controlled tests.
® = Registered trademark of the KingKrete-Group in many countries.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this KingKrete Inc. publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by KingKrete Inc. either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not KingKrete Inc. are responsible for carrying out procedures appropriate to a specific application.

KingKrete Middle East
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