

KingRep® EPBM

Solvent free epoxy lining and benching mortar.

DESCRIPTION

KingRep EPBM is a three component solvent-free lightweight epoxy mortar, designed principally for use with maximum chemical and abrasion resistance for protection of concrete and other substrate in sewage tanks and manholes. The lightweight graded filler system along with thixotropic additives, allows lining for high build applications particularly in vertical and overhead situations.

When used in conjunction with either KingFloor Primer ML the product provides excellent adhesion to concrete materials. When finished correctly, KingRep EPBM provides an impermeable layer with good resistance to abrasion, weathering and chemical attack. KingRep EPBM will cure in damp conditions and has a strength that exceeds normal concrete strength.

KingRep EPBM is supplied in a grey colour to match existing concrete substrates.

KingRep EPBM application areas include, lining and benching manholes, sewage tanks, and all similar structures which require impervious mortar or lining to achieve maximum chemical resistance.

METHOD OF USE

SURFACE PREPARATION

The surface must be structurally sound, free from oil, grease and other forms of contamination. Concrete surface should be dry and suitably prepared either by scabbling or grit blasting to remove any surface laitance. Steel surfaces should be grit blasted to remove all rust and scale. (See the DCP Guide to Surface Preparation for further details).

PRIMING

Substrates should be primed with KingFloor Primer ML. The primer should be applied so that the surface is thoroughly wet, ensuring there is a continuous film of resin over the surface. The KingRep EPBM should be applied whilst the primer is still tacky.

MIXING

KingRep EPBM comprises three components, a resin base, hardener and filler which are supplied preweighed in the correct proportions. Under no circumstances should part mixing be carried out.

TECHNICAL PROPERTIES

Compressive strength: BS6319, Part 2 : 1983	> 75 MPa
Tensile strength: BS6319, Part 7 : 1985	> 9 MPa
Flexural strength: BS6319, Part 3 : 1990	> 22 MPa
Bond strength to concrete:	> 2.0 MPa (concrete failure)
Pot life:	1 - 2 hr @ 25°C
Mixed density:	1.9 ± 0.1 g/cm ³

Taking care to ensure that the bottom and sides are thoroughly scraped, transfer the entire contents of the HARDENER container into the RESIN container. Using a mixer attached to a slow speed electric drill, mix for approximately 2 minutes until a uniform consistency is obtained. The resin mixture should then be transferred to a separate container or forced action mixer such as a creteangle type mixer, and the filler gradually added and mixed for a further 2 minutes or until the filler has thoroughly wetted out and a uniform consistency obtained.

APPLICATION

The KingRep EPBM should be applied and well compacted, by steel trowel. The lightweight mortar should be applied in successive layers, each layer being well compacted before each application of subsequent material. If the mortar has been allowed to harden, the surface should be abraded and a further coat of KingFloor Primer ML applied.

Where necessary, the mortar is shaped to the required profile e.g. to form a cove and trowelled to a smooth finish.

This operation will be aided by lightly wiping the trowel with KingKrete solvent.

WORKING TIME

KingRep EPBM has a working time of approximately 90 minutes at 20°C. Mixed material should not be left standing for any length of time prior to application as this will considerably reduce its working time.

WORKING CONDITIONS

KingRep EPBM should not be applied at temperatures below 5°C.

KingRep® EPBM

Solvent free epoxy lining and benching mortar.

CURING

KingRep EPBM should be allowed to cure for 24 hours at 20°C. At the same temperature, full mechanical and chemical properties are achieved after 7 days (please consult our Technical Department for details of curing times at other temperatures).

CLEANING

Clean uncured material with KingKrete solvent. Cured material can only be removed mechanically.

PACKAGING

KingRep EPBM is available in 16 kg pack size comprising resin base, hardener and filler component.

KingFloor Primer ML is available in 5 kg packs comprising resin base and hardener.

SPECIFIED THICKNESS RANGE

3 – 12 mm in a single layer.

YIELD

KingRep EPBM: 3 m²/16 kg pack @ 3 mm thick. KingFloor Primer ML: 4.0 - 5.0 m²/litre.

STORAGE

Shelf life is 1 year when stored under cover, out of direct sunlight and protected 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 eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

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.

Ref: KK-03034-MEA-R01 | Issue: 01.2026

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.