

Preblended, polymer-modified, cementitious repair mortar

webercem mortar



Uses

- General-purpose high-strength mortar
- Patch repairs to concrete floors and other horizontal surfaces
- Thin bonded vertical repairs to concrete, max 20 mm

Constraints

Not suitable for soffit repairs.

Do not place when substrate temperature is below 5°C or when ambient temperature is below 5°C. **Protect from frost.**

webercem mortar has greater chemical resistance to mild acid attack than normal sand/cement mixes, but in situations liable to chemical spillage **webertec** resin-based systems are more suitable. Please contact our Technical Department for details.

About this product

webercem mortar is a general purpose high strength mortar for the repair of concrete, to both horizontal and vertical surfaces. This product has been formulated to comply with the requirements of BS EN 1504-3 as an R4 mortar. It is used in conjunction with **webercem keycoat** primer.

Features and benefits

- ▲ Resistant to water penetration
- ▲ Good adhesion to concrete
- ▲ Faster strength development than ordinary sand-cement mortar
- ▲ Formulated to comply with the requirements of BS EN 1504-3 as an R4 mortar
- ▲ Resistant to foot and vehicular traffic

Technical data

Performance to BS EN 1504-3

Test results – all intended uses

Performance characteristic	Method	BS EN 1504-3 requirement	Pass/Fail
Compressive strength	EN 12190	≥ 45 MPa	Pass
Chloride ion content	EN 1015-17	≤ 0.05%	Pass
Adhesive bond	EN 1542	≥ 2.0 MPa	Pass
Restrained shrinkage/expansion	EN 12617-4	Bond strength after test ≥ 2.0 MPa	Pass
Carbonation resistance	EN 13295	$d_k \leq$ control concrete (1.3)	Pass

Test results – certain intended uses

Performance characteristic	Method	BS EN 1504-3 requirement	Pass/Fail
Elastic modulus	EN 13412	≥ 20 GPa	Pass
Thermal compatibility Part 1 Freeze/thaw	EN 13687-1	Bond strength after 50 cycles ≥ 2.0 MPa	Pass
Coefficient of thermal expansion	EN 1770	Result = $8.5 \times 10^{-6}/^{\circ}\text{C}$	N/A
Capillary absorption	EN 13057	$\leq 0.5 \text{ kgm}^{-2}\text{h}^{-0.5}$	Pass

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Preparation

Concrete

Concrete substrates must be adequately prepared either by use of a suitable mechanical method such as water blasting, needle gunning, or other appropriate means.

Old concrete surfaces contaminated with oil or grease require suitable preparation, such as steam cleaning in conjunction with a suitable detergent. Care must be taken to ensure that the oil or grease is removed from the surface and not simply spread over a large area.

New concrete should be at least 14 days old.

Where repairs are carried out, feather edging is not recommended; therefore, the perimeter of area to be repaired should be cut back to provide a square edge, minimum 10 mm.

Before application of **webercem keycoat**, the concrete should be thoroughly wetted but all surface water must be removed.

Steel

Steel reinforcement which has been exposed during preparation should be completely uncovered to the full circumference of the bar. Rust scale, corrosion products and other deposits shall be removed from reinforcement by grit blasting or other approved methods to achieve first quality to BS 7079-A1 (equivalent to Swedish Standard SA 2^{1/2}).

Steel cleaning shall include hidden faces at the back of bars and at intersections, and the bonding agent/holding primer applied immediately after. In many instances where chloride-induced corrosion is absent, and where grit blasting is not practical, wire brushing or other techniques may be acceptable to the engineer, provided that care is taken not to polish the surfaces of the rust on the steel.

BS EN 1504-10 states: *Where exposed reinforcement is contaminated with chloride or other material which may cause corrosion, the whole of the circumference of the contaminated reinforcement shall be cleaned by water jets not exceeding a pressure of 18 MPa to remove the chlorides and other contaminants unless electromechanical methods of protection and repair are to be used.*

webercem keycoat bonding slurry

Mix in the ratio of 3 volumes of **webercem keycoat** to 1 volume of clean water. Slowly add powder to water mixing continuously to a smooth creamy consistency.

Apply the slurry by a stiff brush and scrub well in. **The slurry must be tacky when applying webercem mortar.**

In hot weather the slurry dries quickly and, therefore, it is advisable that **webercem mortar** is mixed ready for application before the bonding slurry is applied. If **webercem keycoat** does dry, it must be removed mechanically and a further coat applied.

In certain circumstances, especially in warmer conditions, it is more appropriate to use an epoxy primer such as **webertec EP bonding aid**.

Mixing

webercem mortar must be mixed in a forced-action mixer such as a Mixal or Creteangle.

Slowly add the contents of a 25 kg bag of **webercem mortar** to 2.4 – 2.6 litres of clean water and mix for at least 3 minutes until a uniform colour and consistency is attained.

Application

Apply the mortar to the tacky **webercem keycoat** or **webertec EP bonding aid**, compact into position and finish with a steel float. For vertical repairs, carefully tamp the mortar into position in layers of about 10 – 20 mm, and allow to reach initial set before applying the next layers of **webercem keycoat** or **webertec EP bonding aid** and **webercem mortar**.

On small floor repairs, cut out the damaged concrete to ensure the repair is 'toed' into the surrounding concrete. It is recommended that the surrounding concrete is sealed with **webertec acrylic sealer**, which is a low-viscosity in-surface sealer, to reduce the problems of degradation of concrete adjacent to the repair.

Reference

For further details of recommended procedures, refer to BS EN 1504-10 *Site application of products*.

Curing

Good curing is essential. Immediately after the finishing operation, spray with water and cover with closely-fitting polythene sheeting or spray with **webercote primer** and cover with close contact polythene sheet sealed at the edges with water-resistant tape.

Alternatively, spray-apply a proprietary curing membrane with a minimum efficiency of 50%. If coatings are to be applied subsequently, check the compatibility of the curing membrane, otherwise it may have to be removed before coating.

Packaging

webercem mortar is supplied in 25 kg polylined bags.

Coverage

1 bag yields 12.5 litres when mixed with 2.5 litres clean water.

Coverage: 1 m² at 12.5 mm thickness.

Storage and shelf life

Shelf life is 12 months from date of manufacture if stored properly in unopened and undamaged packaging in dry conditions within the temperature range 5°C to 25°C. If stored at higher temperatures and high humidity, the shelf life will be reduced.

Protect from frost.

Health and safety

Contains cement (Contains chromium (VI). May produce an allergic reaction). Harmful by inhalation. Irritating to eyes and skin. Keep out of the reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical help. After contact with skin, wash immediately with plenty of soap and water. Wear suitable protective clothing, gloves and eye/face protection.

For further information, please request the Material Safety Data Sheet for this product.

Technical services

Weber's Customer Services Department has a team of experienced advisors available to provide on-site advice both at the specification stage and during application. Detailed specifications can be provided for specific projects or more general works. Site visits and on-site demonstrations can be arranged on request.

Technical helpline

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Sales enquiries

Weber products are distributed throughout the UK through selected stockists and distributors. Please contact the relevant Customer Services Team below for all product orders and enquiries.

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