

Low-resistivity, polymer-modified, Highways Agency Class M patching mortar and render for cathodic protection

weber.cem mortar CP

multifix repair mortar CP



About this product

weber.cem mortar CP is a pre-batched, single-component mortar needing only mixing with water to produce a render with low resistivity, suitable for patch repairs on concrete structures where cathodic protection systems are to be used.

Technical data

Performance

Note: The following test results were obtained in laboratory conditions at 20°C

Hardened density	2170 kg/ m ³	
Bond to concrete	> 1.5 N/mm ² depending on substrate	
Bond to concrete after thermal cycling	> 1.0 N/mm ² depending on substrate	
Interlayer bond strength	> 2 N/mm ²	
Compressive strength	3 days	23 N/mm ²
	7 days	27 N/mm ²
	28 days	35 N/mm ²
Electrical resistivity	28 days saturation	8250 Ωcm

Physical properties

Colour	Mid grey
Principal ingredients	Cement, fine aggregates, thixotropic agents, acrylic polymer powder. Max. agg size 1.0 mm
Powder bulk density	1600 kg/m ³
Cement content approx	500 kg/m ³
Total chloride ion content	Less than 0.06% by wt cement

Uses

- Levelling rough surfaces of concrete
- Rendering and building up thicknesses over low cover to steel reinforcement
- Patch repairs to concrete bridge abutments, parapets, beams and crossheads
- Filling-in of core holes, small voids and shutter tie holes
- For tunnels, car parks, bridges, and marine structures such as jetties where cathodic protection is to be used as a preventative treatment
- For vertical and horizontal surfaces
- Suitable for external and internal surfaces

Constraints

Limited to 10 mm thickness per layer for rendering.
 Do not use where there is a large variation in thickness.
 Do not use where the substrates are subject to movement or are cracked.
 Do not use on heavily trafficked floors.

Features and benefits

- ▲ Good bond to concrete – damp or wet
- ▲ Durable – does not crack or craze when applied and properly cured
- ▲ Easy to use – can be mixed by hand or mechanically
- ▲ Easy to apply – can be applied easily with a spray pump or by trowel without slumping
- ▲ Easy to finish – good smooth finish obtainable with a float or sponge. Provides a cohesive and level surface suitable for overcoating.
- ▲ Complies with Highways Agency Class M mortar specification – contains more than 400 kg/m³ of ordinary Portland cement to BS 12, the maximum size of aggregate does not exceed 2 mm, the total chloride ion content is less than 0.1% of cement, the resistivity at 28 days saturation is between 5 kΩcm and 15 kΩcm.

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Preparation

All substrates must be sound, cohesive, free of loose matter, oil, grease and dust.

Concrete surfaces must be adequately prepared by use of scabbling, grit blasting, high pressure water jetting, needle gunning or other appropriate means to provide an adequate mechanical key for the mortar.

Old concrete surfaces contaminated with oil or grease require suitable preparation. New concrete must be cured effectively for at least 14 days or as directed by the engineer using an approved curing method not including use of a permanent curing membrane.

Fill voids with **weber.cem mortar CP** mixed to a stiffer mortar consistency and allow to cure.

The perimeter of each area where **weber.cem mortar CP** is to be applied must be cut back square. Feather edging is not permitted. Use temporary battens or a wet mortar thickness gauge to ensure that the correct thickness of mortar is applied. Thoroughly dampen the area with clean water before applying **weber.cem mortar CP**.

Mixing

Water additions (per 25 kg bag)

As a repair mortar and for core hole filling: 2.75 to 3.0 litres
 For bondcoat and for pumping: 3.25 litres
 For hand application as a render: 3.0 to 3.25 litres

For hand application

Mix **weber.cem mortar CP** in a forced-action mixer or in a clean bucket using a paddle and a slow speed drill for at least 2 min. at a speed not exceeding 500 rpm. For small quantities less than 2 kg, mixing by hand using a spatula is permissible.

For machine application

Use a Putzmeister P11 or similar machine. Machine mix the mortar for at least 2 mins using not more than 3.25 litres of clean water per 25 kg bag.

Useable time after mixing: 60 min at 20°C.

Application

Temperature range of application: +5°C to +35°C. Do not apply on frozen surfaces or when frost is expected within 24 hours unless special precautions are taken to protect the substrate and the finished work from falling below 5°C. Do not traffic until 4 days after application.

Hand application: as a render

Apply an initial bondcoat with a plaster float to a thickness of about 2 mm pressing well onto the damp substrate, then immediately apply the first layer of **weber.cem mortar CP** to the required thickness not exceeding 10 mm in total. Leave a rough surface suitable for subsequent bonding of the second coat which should be applied as soon as the first layer has hardened sufficiently to support the second layer (approx 4 hours at 20°C).

Hand application: as a patching mortar

Apply an initial bondcoat with a plaster float to a thickness of about 2 mm pressing well onto the damp substrate, then immediately apply the first layer of **weber.cem mortar CP** mixed to a stiffer consistency to the required thickness: up to 20 – 30 mm per layer on vertical surfaces, up to 15 mm on soffits (see Size of Repairs Table above). Any subsequent layers of **weber.cem mortar CP** should be applied not later than 24 hours after the previous layer (at 20°C).

Machine application

Apply the mixed **weber.cem mortar CP** by spray pump to the required thickness (max. 10 mm in one pass) and level off with a screeding bar. When applying a total thickness of 20 mm in 2 layers, leave the first layer 'as screeded', before applying the second layer as soon as the first layer is firm enough to support it.

Apply 2nd layer of weber.cem mortar CP after 4 hours and within 24 hours at 20°C.

Finishing

A sponge may be used for a slightly textured finish. Finish off with a float for a smooth finish but over-trowelling can lead to surface crazing.

Curing

Immediately after completion of finishing and thereafter for the curing period, the mortar shall be protected against harmful effects of weather, including rain, rapid temperature changes, frost and from drying out. The method of curing shall prevent loss of moisture from the mortar. The curing time shall be three days at 20°C.

Size of repairs

Principal uses of weber.cem mortar CP	Typical area (mm x mm)	Thickness per layer	Maximum thickness*
As a patch repair mortar on vertical or horizontal surfaces	300 x 300 600 x 600	20 – 30 mm up to 15 mm	50 mm 30 mm
As a patch repair mortar on soffits	300 x 300 600 x 600	max. 15 mm max. 10 mm	30 mm 20 mm
For filling of core holes	50 mm dia. 100 mm dia.	Unlimited Unlimited	Unlimited Unlimited
Rendering by spray or by hand	Up to 3 m ² **	10 mm	20 mm

* For thicker sections or larger areas use **weber.cem spray CP** (Gunite application) or **Five Star repair concrete CP** (Flowing concrete in shuttered applications).

** For larger areas, provide suitable joints.

Packaging

weber.cem mortar CP is supplied in 25 kg bags.

Yield

One bag will yield approx. 12 litres.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 6 months from date of manufacture.

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
 Tel: (01525) 722110

Sales enquiries

Weber products are distributed throughout the UK through selected stockists and distributors. For UK sales enquiries and overseas projects, contact **Weber's** Sales office.

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