# webercem lightweight

High build, cementitious mortar for vertical and soffit repairs

- Hand placed, lightweight concrete repair solution
- High build up to 75mm
- Application onto vertical and soffit surfaces

# About this product

webercem lightweight is a polymer-modified, cementitious mortar mix, with specially selected lightweight fillers. It is preblended, contains a polymer powder and simply requires the addition of clean water to produce a mortar suitable for both soffit and vertical repairs in situations where high build replacement with conventional concrete is impractical. Since its introduction in 1985 webercem lightweight has been widely used in concrete repairs because of its ability to be applied on to vertical and soffit surfaces. This product has been formulated to comply with the requirements of BS EN 1504-3 as an R2 mortar.

# Features and benefits

- High build up to 75mm in soffit patch repairs, without formwork.
- Easy to apply, excellent application properties.
- Excellent adhesion to well prepared concrete.
- Factory preblending eliminates on site mixing errors and variations in quality, availability and grading of local cements and aggregates.
- Formulated to comply with the requirements of BS EN 1504-3 as an R2 mortar
- Can be overcoated with webercote anticarbonation coatings for optimum protection of reinforced concrete.

HAND PLACED	MEETS BS EN 1504-3 as gn 22 MORTAR	LIGHTWEIGHT
	75mm 个个个 APPLICATION	MECHANICAL
	THICKNESS	MIXING



## Uses

- High build concrete repairs
- Repairs to soffits
- Repairs to building structures

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20 kg <b>webercem lightweight</b> with 2.4 litres of water cured at 20°C.				
Working life	30 to 40 minutes depending on temperature			

Technical data EN1504							
Performance Characteristic	Method	Requirement	Result	Pass/Fail			
Compressive Strength	EN 12190	≥15 MPa	>20 MPa	Pass			
Chloride ion content	EN 1015-17	≤0.05%	0.02%	Pass			
Adhesive bond / cohesive failure within mortar	EN 1542	≥0.5 MPa	0.5 MPa	Pass			
Restrained shrinkage / expansion	EN 12617-4	Bond strength after test ≥ 0.8 MPa	0.8 MPa	Pass			
Thermal compatibility Part 1 Freeze-thaw	EN 13687-1	"Bond strength after 50 cycles ≥0.8 MPa"	0.8 MPa	Pass			
Thermal compatibility Part 2 Thunder shower	EN 13687-2	"Bond strength after 30 cycles ≥0.8 MPa"	0.9 MPa	Pass			
Thermal compatibility Part 4 Dry cycling	EN 13687-4	"Bond strength after 30 cycles ≥0.8 MPa"	0.9 MPa	Pass			
Coefficient of thermal expansion	EN 1770	Declared value	9.5 x 10- 6/°C	N/A			
Capillary absorption	EN 13057	≤0.5 kgm-2h-0.5	0.13	Pass			



# webercem lightweight

#### Preparation Concrete substrates

Concrete substrates must be adequately prepared by use of scabbing, needle gunning or other means, as appropriate. Oil and grease must be removed by steam cleaning together with suitable detergent. Any contaminated concrete must be removed. All damaged concrete should be cut back to a sound surface and at least 15mm behind any exposed reinforcement. The edges of the repair should be cut perpendicular to the surface of the repair.

**Note:** Disc cutting is not recommended due to hazardous respirable crystalline silica that can be produced.

New concrete must be at least 14 days old. Thoroughly saturate the concrete but remove excess water.

#### Steel

Steel reinforcement which has been exposed during preparation should be completely uncovered to the full circumferance 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 21/2). Steel cleaning shall include hidden faces at the back of bars and at intersections. Bonding agent/holding primer must be applied immediately after cleaning.

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. Apply a protective coating of **webercem bondcoat** as described below to act as a holding primer.

# Mixing

#### Bonding slurry

Mix **webercem bondcoat** in the proportions I volume water to 2.5 volumes of **webercem bondcoat**, adding powder gradually to the water and stirring continuously until a smooth, creamy consistency is obtained.

#### Lightweight patch repair mortar

A low-shear, forced-action mixer must always be used e.g. Mixal Mixer or Creteangle. Hand mixing is not recommended for this product.

Mixing time should be kept to 2 minutes from adding the powder to the water.

Over mixing will entrain air and reduce compressive strength. Do not over mix.

Water addition is 2.4 – 2.7 litres of water per 20kg bag. Start at 2.4 litres of water and adjust as required upwards to 2.7 litres.

Use only potable water for mixing.

Do not add extra water above stated quantities.

# Application

Apply **webercem bondcoat** immediately to the prepared concrete surface which must previously have been thoroughly dampened with water. Use a stiff brush to scrub the slurry well into the surface. The approximate application rate is 1.5 m<sup>2</sup> per litre. Place the repair material on to the slurry whilst it is tacky. In hot weather the slurry will dry quickly once it is applied and it is prudent to mix the mortar ready for application prior to applying the slurry. If the **webercem bondcoat** does dry, it should be removed mechanically and a further coat must be applied.

Apply **webercem lightweight** mortar to the substrate whilst the bonding slurry is still tacky and compact well into place.

#### Curing

Unless a coating or other system is to be applied to the surface, cure with a suitable membrane, applied immediately after finishing.

Where a coating etc. is to be applied, cure with close contact polythene for a minimum of 7 days; the polythene should be tight on the surface and taped around the edges.

Although shrinkage is minimised, some very fine cracking may occur particularly in large flat areas, or in adverse drying conditions – even when curing with polythene. Bond and durability are not affected and a decorative treatment of **webercote** should be applied.

#### Important notes

When replacing faulty cover on reinforced concrete, using **webercem bondcoat** and **webercem lightweight**, the minimum thickness of cover must be 12mm. Below this figure, the concrete should not be pre-wetted but the following procedure should be taken:

Apply one coat of **webertec EP bonding aid** to the freshly prepared steel reinforcement and allow to become tack-free (3 to 6 hours). Where time restraints do not allow continuous working, to ensure adequate bond, this first protective coat should be dusted with fine, clean, dry sand and allowed to cure thoroughly. Excess sand and any dirt should be removed before the repair process is continued. Apply a second coat of **webertec EP bonding aid** to both the steel and concrete and whilst this is still tacky, apply the **webercem lightweight** using a gloved hand. The surface of the mortar should then be finished with a clean, steel float.

2 Where very thick sections are required, multiple applications may be necessary. Intermediate surfaces should be scratched to give a good mechanical key. Successive applications require the use of either webercem bondcoat or webertec EP bonding aid.

When cured, **webercem lightweight** and **webercem bondcoat** are stable to freeze/thaw conditions but following good concreting practice they should not be applied in freezing weather or at temperatures below 5°C.

### Packaging and yield webercem lightweight

Approximately 15 litres per 20kg bag, i.e. about 1m² at 15mm thickness.

#### webercern bondcoat

Approximately 1m² per 5kg.

# Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 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.

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To the best of our knowledge and belief, this information is true and accurate, but as conditions of use and any labour involved are beyond our control, the end user must satisfy themselves by prior testing that the product is suitable for their specific application, and no responsibility can be accepted, or any warranty given by our Representatives, Agents or Distributors. Products are sold subject to our Standard Conditions of Sale and the end user should ensure that they have consulted our latest literature.



