

Moisture-tolerant epoxy primer for bonding epoxy repair mortars and new cement mixes to existing concrete

webertec EP bonding aid



Uses

- As a primer for **webertec EP highbuild** where its application is to vertical and soffit applications
- Adhesive to bond freshly-mixed cementitious mortars
- Adhesive to bond cut, mitred bricks and neoprene bearing pads to concrete
- Protective coating to concrete and metal; two-coat application required for effective seal
- Bonding aid to steel reinforcement rebar for concrete repair mortars in aggressive environments
- Protective coating to exposed steel against a wide range of chemicals
- Bonding aid for concrete repairs to protect steel reinforcement rebar in marine environments from excessive chloride attack
- Adhesive to pavement repair concretes in areas of high traffic loadings or exceptional circumstances

About this product

webertec EP bonding aid is a high-build epoxy resin for priming epoxy repair mortars for bonding to concrete and masonry structures. Exceptional bond to vertical and soffit applications for priming repair mortars.

It may also be used to bond freshly-mixed cementitious concrete, mortars and renders to existing, sound concrete substrates.

Technical data

All tests carried out at 20°C at 7 days

	Test method	
Compressive strength	BS 6319-2:1983	>80 N/mm ²
Tensile strength	BS 6319-7:1985	>30 N/mm ²
Flexural strength	BS 6319-3:1990	>50 N/mm ²
Modulus of elasticity	BS EN 13412:2002	2000 N/mm ²
Modulus of elasticity (filled)	BS EN 13412:2002	>15000 N/mm ²
Adhesion to concrete	BS EN 1542:1999	*3.9 N/mm ²
Bond to abraded steel		>15 N/mm ²
Bond to new concrete		* > 2.5 N/mm ²
Pot life of 1 litre		10 – 12 minutes
Coverage on rough concrete		1.5 – 3 m ² /litre per coat
Minimum temperature use		5°C

* Failure of substrate concrete

Features and benefits

- ▲ High initial adhesion to promote excellent bond between substrate and repair mortar
- ▲ Moisture tolerant, allowing work to continue during inclement weather
- ▲ Can be used down to 5°C, allowing work to continue during winter
- ▲ Resistant to a wide range of chemicals

EU VOC regulations 2008

EU limit for webertec EP bonding aid (cat A/j): 550 g/l (2007)/500 g/l (2010). **webertec EP bonding aid** contains <90 g/l VOC.

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Preparation

No primer will develop full bond strength without the surfaces of the materials to be bonded being carefully prepared to give a clean, mechanically sound surface.

Concrete

When bonding to concrete it is the surface strength of the concrete in tension/shear which is fundamental. Many engineers consider the strength of concrete only in terms of cube strengths. Unfortunately, in practice, it is often possible to have a concrete substrate which on the basis of the cube or cylinder compressive strength is satisfactory but which has a very low surface strength and is, therefore, unacceptable.

The surface must be prepared prior to bonding by mechanical means such as grit blasting, scarifying, wire-brushing or bush hammering. Care should be taken not to induce micro cracks in the substrate.

Old concrete is often contaminated with oil and grease and this must be removed before preparing as above. Steam cleaning in conjunction with a suitable detergent has proved an effective method. Care must be taken to ensure the oil and grease is removed and not simply spread over a larger area.

New concrete should be cured for at least fourteen days using efficient curing techniques (NB: Spray-on curing membranes must not be used as they may impair the subsequent bond, unless they are removed after use).

Steel substrates

Steel substrates should be grit blasted to Swedish Standard SA 2^{1/2} and then degreased with a suitable solvent (e.g. **webertec solvent**) immediately prior to bonding.

Other substrates

Information on recommended surface preparation procedures for other substrates is available on request.

Mixing

Although **webertec EP bonding aid** can be used at lower temperatures, it is recommended that it is stored overnight at a minimum temperature of 15°C prior to mixing and application. In hot climates, store overnight in air-conditioned storage.

Packs have measuring cups included for part mixes. Details of proportioning is given on the pack labels.

Use a clean, dry plastic bucket or container for mixing. Pour in all the resin. Add the hardener and mix thoroughly to an even colour and consistency.

Small quantities can be mixed using a flat bladed palette knife or flat stick, but larger amounts should be mixed using a spiral headmixer or Epi-mixer on an electric drill at a speed below 450 rpm.

Application

Immediately after mixing, **webertec EP bonding aid** should be applied by brush to the prepared surface in a thin coat at a uniform rate. On application to concrete it must be thoroughly brushed into the surface.

The material must still be tacky when applying other **webertec EP** products or cementitious mixes.

Tools and any surplus material on surfaces should be cleaned with **webertec solvent** before set takes place.

Pot life and cure time

The effective workable time of mixed **webertec EP bonding aid** is comparatively short when left in the mixing vessel i.e: 12 min. at 20°C – 1 litre pot

The pot life can be extended by pouring the mixed material into a shallow metal tray to dissipate the heat created during the polymerisation hardening phase.

Cure time is dependent on many factors including site conditions, ambient and surface temperatures, and quantities mixed. The table below is a guide only to the maximum cure time available.

7°C	10°C	20°C
6 hr	3½ hr	1¼ hr

It is essential that these priming coats are tacky prior to the application of other epoxy or cement-based products.

Packaging

webertec EP bonding aid is supplied in 5.6 kg packs.

Coverage

Coverage 1.2 m² to 2.5 m²/kg, depending on surface roughness.

Weight 5.6 kg – yield 5 litres.

Storage and shelf life

Shelf life is at least 12 months when it is kept unopened, in proper storage conditions in a cool, dry area.

Health and safety

Contains epoxy constituents. Refer to information supplied by manufacturer (see Material Safety Data Sheet).

All skin contact with epoxy resin products should be avoided. Barrier creams should be used and operatives should wear protective clothing including gloves. Working areas should be well ventilated.

The hardener content is alkaline and labelled as corrosive. The resin content is labelled as an irritant. The flash point of all components is in excess of 100°C. In the event of fire use foam, dry chemical, carbon dioxide (CO₂) or water fog extinguishers.

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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