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construction solutions

Moisture-tolerant epoxy primer for weber.tec force composite sheets

weber.tec force EP primer

enforce primer

About this product

weber.tec force EP primer is a two-component epoxy resin primer for concrete and masonry surfaces. It is used to seal and stabilise prepared surfaces prior to bonding fibre sheets for structural strengthening.

Technical data

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

Physical properties

Colour	Translucent
Density	1.12 kg/litre
Thickness of application	100 µm
Application viscosity	350 mPa s

Mechanical properties

Compressive strength	100 N/mm²
Tensile strength	19 N/mm²
Flexural strength	30 N/mm²
Bond to concrete	> 5.3 N/mm²
Young's modulus	5 kN/mm²
Coefficient of expansion	8 x 10^{-6} mm/mm °C
Glass transition temperature	60°C

Uses

- Epoxy primer for carbon fibre, glass fibre and aramid sheets
- To stabilise weak surfaces prior to strengthening
- A component of **weber.tec force composite strengthening system**

Features and benefits

- Moisture-tolerant primer allowing work to proceed on site
- Develops excellent bond strength to prepared substrate
- Easy to mix and apply
- Will stabilise surfaces allowing work to proceed on marginally weak surfaces

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Preparation

No primer will develop full adhesion to the surface of the substrate without the substrate being carefully prepared. The substrate should be clean and mechanically sound to receive the primer.

When bonding **weber.tec force** composites to concrete it is important to check the tensile bond strength f_{ctm} of the concrete surface.

A high-strength concrete may have a poor quality surface with a low tensile bond strength and could be unsuitable for bonding.

Minimum f_{ctm} values shall be:

1 N/mm²	**weber.tec force carbon sheet**
1 N/mm²	**weber.tec force aramid sheet**
1 N/mm²	**weber.tec force glass sheet**

Tensile bond pull-off tests shall be conducted after the surface has been prepared using light grit blasting or grinding.

Old concrete may be contaminated with oils, grease or salts and these must be removed prior to priming.

New concrete should be cured for at least 14 days using efficient curing techniques. If a spray-on curing compound has been used, this must be removed by light grit blasting prior to priming.

Mixing

Use a clean, dry plastic bucket or container for mixing. Pour in the resin and slowly add the hardener component. Mix thoroughly to an even colour and consistency.

Small quantities can be mixed by hand using a flat bladed knife. Larger amounts should be mixed using a slow-speed drill and spiral head mixer.

Application

Immediately after mixing, **weber.tec force EP primer** should be applied by brush or roller to the prepared surface.

Apply to a uniform, thin coat and brush into the surface. Avoid material running down the substrate.

Pot life and cure time

The effective workable time of the mixed primer is comparatively short when left in the mixing vessel, i.e. 20 minutes at 20°C.

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

Temperature	7°C	10°C	20°C
Pot life	10 hr	6 hr	2 hr

Packaging

5.5 kg pack yielding 5 litres.

Coverage

3 – 4 m²/litre per coat.

Storage and shelf life

Shelf life is at least 12 months when kept unopened in correct 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 (CO_2) 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
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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