weber SAINT-GOBAIN

Fast-setting repair concrete for pavement patch or full-depth repairs

webercem pyrapatch

About this product

webercem pyrapatch is a prepacked product based on hydraulic cements with specially graded non-reactive aggregates. The product is polymer modified which, when mixed with clean water, produces a fast setting repair concrete, suitable for patch or full-depth repairs up to 2 m². Typical patch repairs up to 100 mm depth and extended with aggregate for full depth repairs. Conformity testing to BS EN 1504-3 has confirmed that **webercem pyrapatch** meets the requirements for a Class R4 repair product.

Technical data

The following test results were obtained in laboratory conditions		
Thermal cycling resistance at 20°C to –15°C		+ 21 microstrain
Bond strength	at 10°C at 20°C	> 1·0 N/mm² > 1·2 N/mm²
Modulus of elasticity		21·5 kN/mm²
Coefficient of thermal expansion		11·1 x 10^{-6} per °C
Hardened density		2340 kg/m³
Skid resistance value (polished)		SRV 54
Abrasion resistance (test EN 13892-4)		0.01mm
Abrasion resistance (test Classification to EN 13813)		AR 0·5
Abrasion resistance (test Classification to BS 8204)		Special
Working time	at 20°C	15 – 20 minutes
Setting time	at 20°C	30 minutes

Strength development

	Compressive strength	Tensile strength	Flexural strength
3 hours	30 N/mm²	1·4 N/mm²	2·8 N/mm²
6 hours	35 N/mm²	N/A	N/A
1 day	45 N/mm²	1·68 N/mm²	6·8 N/mm²
7 days	55 N/mm²	1·95 N/mm²	8·6 N/mm²
28 days	60 N/mm²	2·14 N/mm²	9·8 N/mm²

Data based on water addition of 2 litres per 25 kg bag at 20°C
Further technical data is available. Please contact **Weber**'s Customer Services Department.

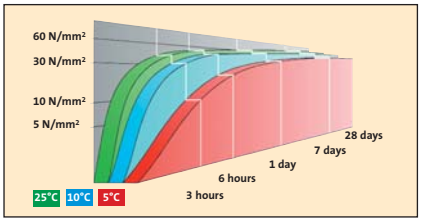
Uses

- Small- scale, rapid concrete repairs, 25 mm – 100 mm depth
- Industrial floors, rapid repair of failed floor slabs
- Bridge deck repairs
- Rapid repairs to pavement concrete both thin-bed and full-depth
- Car park decks and ramps
- Forecourts which require early trafficking
- Loading bays
- Coastal slipway and causeway repairs in tidal zones

Features and benefits

- 15 – 20 minute working time at 20°C
- Trafficable within 3 hours
- Shrinkage compensated
- Sulphate resistant
- Resistant to freeze/thaw action
- Can be used for winter work down to 5°C
- Contains non-reactive aggregates
- May be extended with non-reactive 10 mm granite aggregate for full depth repairs over 100 mm depth
- Excellent strength gain at low temperatures
- Self priming
- Good compatibility with parent concrete
- Requires only the addition of water
- Independently tested by NAMAS approved laboratory

Compressive strength development of webercem pyrapatch



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Preparation

All concrete to be repaired should have a minimum characteristic strength of 25 N/mm² and a bond strength of 1 N/mm². Surface preparation method should be carefully chosen so as to minimise the risk of micro-cracking in the parent concrete thus affecting the bond with the repair. For full depth repairs all exposed reinforcement steel should be cleaned to Swedish Standard SA 2½.

Scabble or break out spalled area to a depth sufficient to remove all deteriorated concrete providing an even, open texture. Avoid micro cracking to the parent concrete.

It is essential that edges be cut square to a minimum depth of 10 mm and are lightly scabbled. Feather edging is not recommended. Further breaking out is required at the saw-cut edge to achieve a minimum of 25 mm depth of repair.

Clean and remove all oil, grease, dirt and loose debris from the area to be repaired. Thoroughly wet the prepared surface with clean water for at least 30 minutes prior to the start of mixing. Remove surplus water to achieve a saturated, surface-dry concrete substrate.

Mixing

Use only freshly opened **webercem pyrapatch** bags and a clean, forced-action mixer such as a Creteangle or Mixal mixer. The mixer capacity should be at least 30% greater than the quantity to be mixed.

Locate the mixer close to the area to be repaired. Working time at 20°C is approximately 15 – 20 minutes. At lower temperatures working time is increased, so it is advisable to keep material warm and use warm water in cold weather conditions.

Charge the mixer with 2 litres of water per 25 kg bag. Gradually add the powder and mix for 3 minutes. Add up to 0·5 litres of additional water if required to achieve the desired consistency.

NB: do not exceed maximum water addition of 2.5 litres water per 25 kg bag.

For repairs over 100 mm thick, bulk out the repair concrete with 10 mm single-sized crushed granite aggregate (25 kg of aggregate per 2 bag mix) and mix for 5 minutes to a uniform consistency.

Application

Place the material in the dampened and prepared area. To ensure satisfactory bonding, place from one side to the other and work the material into the sides and bottom of the repair area.

The use of a stiff brush is recommended to work the **webercem pyrapatch** onto the pre-dampened substrate to enhance the bond.

Screed and level up to existing concrete. Finish by float and texture as required to seal the surface edges and saw cuts.

webercem pyrapatch is designed to have a thixotropic consistency to reduce slump in a repair on a camber. Compact by tamping the surface with a float to fluidise the material.

Setting time

Setting time at 20°C is approximately 25 – 30 minutes.

Winter working

webercem pyrapatch can be used down to 5°C provided cold weather working precautions are carried out.

For applications below 5°C please contact **Weber's** Technical Services Department

Curing

Cure within 30 minutes of laying using an appropriate method such as wet hessian, polythene or a sprayed-on curing membrane.

Protect from frost.

Packaging

webercem pyrapatch is supplied in 25 kg bags.

Yield

Unbulked: yield per 25 kg **webercem pyrapatch** is approximately 12 litres.
Bulked: yield per 50 kg **webercem pyrapatch** and 25 kg of aggregate is approximately 31 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 718877**
e-mail **technical@netweber.co.uk**

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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