

(Previously known as Emer-Clad Preparation Patch Repair)

## High build, medium weight concrete patch repair mortar

### Uses

Emer-Patch High Build Repair is for concrete repairs where its lighter weight nature and high build characteristics makes it ideal for vertical and overhead repair work.

### Advantages

- Achieves 50 MPa @ 28 days.
- Medium weight formulation enabling extra high-build and thereby saving time and expense of multiple applications and reduces the need for formwork
- Can be overcoated with Emer-Clad Facade or other suitable coating after 24 hours\*(refer to Overcoating section)
- Only the site addition of clean water required
- Contains no chloride admixtures

### Description

Emer-Patch High Build Repair is a medium weight concrete repair mortar supplied as a ready to use blend of dry powders which requires only the site addition of clean water to produce a highly consistent, repair mortar.

The material is based on the latest advances in cement, fillers and chemical additives technology and is polymer modified to provide a mortar with good handling characteristics, while minimising water demand. The low water requirement ensures fast strength gain and long term durability.

### Properties

The following results were obtained at a water powder ratio of 0.15 and temperature of 20°C unless otherwise stated.

<b>Compressive strength:</b> AS 1478.2 - 2005	15 MPa @ 1 day 25 MPa @ 3 days 35 MPa @ 7 days 50 MPa @ 28 days
<b>Bond Strength Pull Off:</b> EN 1542:1999	>1.5 MPa
<b>Flexural Strength:</b> AS 1012.11-2000	>6.0 MPa
<b>Indirect Tensile Strength:</b> AS 1012.10-2000	>4.0 MPa
<b>Drying Shrinkage:</b> AS 1478.2-2005	< 400 microstrain @ 7 days < 600 microstrain @ 28 days

The typical properties given above are derived from laboratory testing. Results derived from field applied samples may vary.

## Application Instructions

### Surface preparation

Saw cut or cut back the extremities of the repair locations to a depth of at least 10mm to avoid feather-edging and to provide a square edge. Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae.

If reinforcing steel is exposed in the repair area, remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit-blasting is recommended for this process. Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water immediately after grit-blasting to remove corrosion products from pits and imperfections within its surface.

Where a reinforcement coating is required as an active corrosion protection barrier, it is recommended to apply one coat of a zinc rich primer such as Dulux Metalshield Cold Galv Primer to the steel and allow to dry before continuing.

### Substrate saturation

The concrete substrate should be thoroughly soaked with clean water immediately prior to the application of Emer-Patch High Build Repair. Any residual surface water should be removed from the surface prior to applying the product. Under severe drying conditions repeated soaking may be necessary to ensure the substrate is still saturated at the time of application.

### Priming

For improved build thicknesses apply one coat of Emer-Patch HAR and apply the Emer-Patch High Build Repair whilst the primer is still tacky. If the Emer-Patch HAR primer dries before the application of the Emer-Patch High Build Repair, it must be re-primed before proceeding.

### Mixing

It is important to ensure that Emer-Patch High Build Repair is thoroughly mixed. Due to the thickness of the product, a heavy duty mixer 1200W or above with a Helical mixing paddle is required. For normal applications, place 2.7 litres of drinking quality water into the mixer and, with the machine in operation, add half the 18kg bag of Emer-Patch High Build Repair and mix for 30 seconds, then gradually add the remaining powder and mix for a further 3 to 4 minutes until thoroughly mixed.

It may initially look dry but do not add more than the maximum amount of water. After the required mixing time, the consistency should be like plasticine - smooth and not sagging.

Dependent on the ambient temperature and the desired consistency, a small additional amount (200ml) of water may be added up to a maximum total water content of 2.9 litres per 18kg bag of Emer-Patch High Build Repair.

Note: In all cases Emer-Patch High Build Repair powder must be added to the measured water.

# Emer-Patch™

## High Build Repair

### Application

Apply the mixed Emer-Patch High Build Repair to the prepared substrate by gloved hand or trowel. First, work a thin layer of the mortar into the pre-soaked / primed substrate and then build the mortar onto this layer. Emer-Patch High Build Repair can be applied in sections up to 100mm thickness on vertical surfaces and up to 80mm thickness in overhead locations. Thicker sections should be built up in layers. If sagging occurs during application, the Emer-Patch High Build Repair should be completely removed and reapplied at a reduced thickness onto the thoroughly soaked / primed surface (as detailed earlier under Surface Preparation).

Note: the minimum applied thickness of Emer-Patch High Build Repair is 10mm.

### Finishing

Emer-Patch High Build Repair is finished by striking off with a straight edge and closing with a steel trowel. Wooden or plastic floats, or damp sponges may be used to achieve desired surface texture. The completed surface should not be overworked. Allow the applied Emer-Patch High Build Repair to stiffen before attempting to finish off - this will minimise slumping.

### Cold temperature working

In cold conditions down to 5°C, the use of warm mixing water (up to 30°C) is advisable to accelerate strength development. The material should not be applied when the substrate and/or air temperature is 5°C and falling. At 5°C static temperature or at 5°C and rising, the application may proceed.

### High temperature working

At ambient temperatures above 35°C, the material should be stored in the shade and cool water used for mixing.

### Curing

Under strong drying conditions curing may be necessary. In these conditions, tape down plastic sheeting around the perimeter over the repair job and leave until ready to overcoat

In cold conditions, the finished repair must be protected from freezing.

### Overcoating

\*Under good drying conditions (20°C / 50%RH), Emer-Patch High Build Repair applied at 10mm thick, may be overcoated with Emer-Clad Facade after a minimum of 24 hours. Product applied at greater than 10mm thick (up to 50mm thick) may be

overcoated with Emer-Clad Facade after 3 days drying time. Refer to Emer-Clad Facade TDS for priming and application details.

Other decorative paint top coats can be used as per the manufacturer's instructions for application on new concrete surfaces.

### Cleaning

Tools and equipment should be cleaned with water immediately after use.

### Limitations

Do not mix part bags.

Due to the lightweight nature of Emer-Patch High Build Repair, the product should not be used in areas subjected to traffic nor exposed to moving water during application. Exposure to heavy rainfall prior to the final set may result in surface scour.

**NOTE:** Emer-Patch High Build Repair is not designed to be used as a broad scale building render.

### Estimating

#### Supply

Emer-Patch High Build Repair 18kg:	FE400125-18KG
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#### Yield

10.4 litres/18kg bag (approx. 1.0m <sup>2</sup> at 10mm thickness)
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### Storage

#### Shelf life

Emer-Patch High Build Repair has a shelf life of 24 months from date of manufacture if kept in a dry store in the original, unopened bags.

#### Storage Conditions

Store in dry conditions in the original, unopened bags. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to 4 to 6 months.

### Important notice

A Safety Data Sheet (SDS) and Technical Data Sheet (TDS) are available from the Emer website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

### Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.



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