

Introduction

Polyroof Structural Repair Mortar is a single component, cementitious mortar that, because of its enhanced polymer properties, is rapid hardening, low density, and high strength. The thixotropic nature of the mortar enables easy, high build trowel application for structural repairs. Polyroof Structural Repair Mortar is supplied ready for on-site mixing and application, requiring only the addition of clean water. The product is a Class R3 mortar.

Key Features

- Pre-packaged material, requires mixing with clean water only.
- Easily trowelable mortar for repairs up to 80mm thick.
- Can be applied vertically.
- High bond strength.
- Excellent low sag properties.
- Non-toxic when cured.
- Part bags can be mixed.

Product Information



Code	Item	Pack Size	Approx. Pack Coverage
122064	Polyroof Structural Repair Mortar	25 kg	1.65m ² at 10mm thickness

Compatible Polyroof Systems

Polyroof Structural Repair Mortar can be used on the following systems:

- Protec Range (Evolve, Protec, Lite)
- Elastex Solo System

Consult Polyroof Technical Services for usage advise.

Product Usage

Polyroof Structural Repair Mortar is suited to small repairs on balconies and flat roofs, prior to application of Polyroof liquid waterproofing systems. The mortar can be used to repair asphalt blisters and damaged concrete in horizontal and vertical situations. It can also be used for re-profiling steps, pointing concrete copings, and general repairs to details.

Technical Data

Characteristic	Value
Application temperature	5 - 40°C
Mixed colour	Concrete grey
Min. application thickness	5mm
Max. application thickness	80mm per layer
Min. app temperature	5°C
Max. app temperature	40°C
Working life (approx.)	20°C: 60 minutes 40°C: 30 minutes
Compressive strength	28days: 38.8 MPa
Compressive strength development at 20°C	1 day: 23.5MPa 7 days: 35.0MPa 28 days: 42.0MPa
Adhesive bond	2.20 MPa Class R4 ≥2.00 MPa
Chloride ion content	0.016%
Carbonation resistance	Passes
Elastic modulus	18.2 GPa
Capillary absorption	0.077kg.m ⁻² .h ⁻⁰⁵
Freeze/Thaw cycling	2.28 MPa Class R4 ≥2.00 MPa
Water permeability coefficient equivalent concrete thickness	9.65 x 10 ⁻¹⁵ m/sec 5.7mm of Repair Mortar = 1000mm of concrete
Oxygen diffusion coefficient	2.72 x 10 ⁻⁴² cm ² /sec
Flexural strength	6.5 MPa
Tensile strength	2.67 MPa
Shrinkage	After 7 days: 0.031%
Mixed density	0.14 water:powder ratio: 1725kg/m ³
Reaction to fire	Euroclass A2 – s1, d0

The properties given above are obtained from laboratory tests. Results obtained from on-site testing may vary, according to site conditions.

Preparation and Installation

Remove, back to a sound core, all damaged concrete, blisters in asphalt, or failed repairs. Asphalt blisters may be broken out with a lump hammer.

When cutting back, feather edges must be avoided. The perimeter of the repair area should be stepped to a depth of 10mm by suitable means (power chisel, etc.).

The areas to be repaired must be free from all unsound material, dust, oil, grease, corrosion by-products, and organic growth.

Prior to application of product, apply a light spray of clean water to the area to be treated.

POLYROOF STRUCTURAL REPAIR MORTAR

TECHNICAL DATA SHEET

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Polyroof Structural Repair Mortar should be mechanically mixed using a slow speed (240 rpm) drill and paddle. A normal concrete mixer is NOT suitable. For standard applications, use 3.3 - 3.7 litres of clean water per 25kg bag, depending on the desired consistency. Mixing time, affected by the type of mixer used, averages between 2 - 3 minutes. Mix to minimise entry of air. Apply without delay.

Application

- Prior to application of the mortar, apply a light spray of clean water.
- Apply a scratch coat of Polyroof Structural Repair Mortar (typically 5-10mm) as a bonding agent to the area to be treated. Care must be taken to ensure that this scratch coat is well placed, and adhered, before building up to larger depths begins.
- Apply Polyroof Structural Repair Mortar immediately, by float or trowel to a flush finish, prior to smoothing off. The maximum application thickness is 80mm.*
- Allow to cure before applying Uni-Primer DP and the Protec system. As regards curing, standard concreting procedures should be followed.

*Deeper Repairs: For repairs over 80mm deep, a multi-layer application is required. Ensure that previous layers are well keyed and stabilised, but not fully set – 2 - 6 hours, depending on temperature – prior to the application of subsequent layers. No interlayer priming is required. Final profiling of a high quality is easily achieved with a steel float.

Application Tips

- For multi-layer application, use the fingers of a gloved hand to stipple the first layer's surface.
- Neither wet out nor prime between layers.
- Remix if the mortar thickens - but do NOT add more water.
- Do not trowel too much. If the mortar begins to slump, allow to stabilise and refinish.
- When finishing, trowel outwards from the centre, working towards the perimeter.
- Once stabilised, eliminate trowel marks using a damp sponge.
- For areas subject to vehicular traffic, consult Polyroof Technical Services.
- For large areas of repair, consult Polyroof Technical Services.
- Cold Weather Working (consult Polyroof Technical Services)
- $\geq 3^{\circ}\text{C}$ on a rising thermometer
- $\geq 5^{\circ}\text{C}$ on a falling thermometer
- Hot Weather Working (consult Polyroof Technical Services).

Important note:

Seek advice from Polyroof Technical Services before applying Polyroof Concrete Repair Mortar

on waterproof concrete. Not suitable for trafficked areas.

Storage and Handling

Clean all tools with water immediately after use.

Materials may be stored for up to 12 months in dry, frost-free conditions, in unopened bags at 20°C.

Health and Safety

Safety Data Sheets available on request.

Technical Assistance

For further information, please contact Polyroof Technical Services on 0800 801 890, More information can also be found at www.polyroof.co.uk.