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Altro Patch™

Solvent-free, fast cure epoxy repair mortar
Technical and installation data sheet

November 2016

Product description

Altro Patch is a two-part epoxy resin repair mortar that is supplied in an easy to use form for maintenance teams and contractors.

Altro Patch provides an abrasion and impact resistance surface and is suitable for use in medium to heavy duty areas in as little as four hours after installation.

Standard colours

Altro Patch is available in a grey tone of concrete.

Typical areas of use

- Joint and hole repairs
- Floor patching
- Coveable
- Adjustment of floor levels

Advantages

- Fast curing
- Easy to use
- Can be laid to falls

Typical physical properties

Speed of cure	Pot-life	15-20 minutes @20°C
	Light traffic	4-5 hours @20°C
	Heavy traffic	7-8 hours @20°C

Sustainability

Altro's steps to sustainability program seeks to optimise our performance with respect to the planet's resources. Please refer to www.altro.com for further information.

Chemical resistance

Altro Patch offers resistance to a range of commonly used chemicals. However, premature contact with chemicals (including water) during the curing process may give rise to discolouration, staining and variation in gloss. In all cases of chemical spillage, it is essential that the spillage be immediately removed and the surface washed down with clean water, removing water by wet vacuum after operation. Although some chemicals may cause discolouration, this may not affect the durability and integrity of the resin screed. Please refer to Altro and FeRFA Guidance Note No.3 for further information.

Packaging

Altro Patch is available in a two-part 5kg pack comprising pre-filled resin and a fast cure hardener.

Coverage

1m² / 1kg @ 1mm

Material usage is dependent upon temperature, surface profile and porosity; stated coverage rates should be referred to for guidance only and cannot be relied upon to determine exact quantities. Although stringent quality assurance processes are employed, when colour consistency is required, a single batch should be used.

Storage

Ensure that the product is received in good order and store in a dry, frost free environment, ideally between 15°C and 20°C for at least three days before laying.

It is important to maintain the aggregate temperature during storage. Low temperature in the aggregate will adversely affect the product application.

Excessively high and low storage temperatures will affect the laying performance of the product.

Suitable substrates

Altro Patch may be applied to a variety of substrates including, but not limited to, concrete, polymer-modified cementitious screeds, terrazzo, 25mm marine grade plywood (consult Altro for further guidance). For all proprietary subfloor systems refer to the manufacturer for recommendations and seek further guidance from Altro. FeRFA, The Resin Federation, does not recommend Calcium Sulphate, Anhydrite or Hemi-hydrite screeds for overlayment with synthetic resin surfaces.

Substrate requirements

Substrates should be dry, structurally sound and free from contamination, friable materials or laitance which may affect either the adhesion or penetration of the resin system. All residues of old paint coatings and dust must be removed. Substrates should achieve 26N/mm² compressive strength BS EN 12504-2) and surface tensile strength 1.5N/mm² (BS EN 13892-8). Substrates must include an effective damp proof membrane and contain residual moisture not greater than 5% by weight (75% R.H.) to BS 8203.

Thin-bed synthetic resin systems follow the surface of the substrate, so it is essential that the surface regularity of flatness conforms to or exceeds BS 8204.2 class SR2 (+/- 5mm under a 2 metre straight edge). Any deviation from this may require a surface improver to be applied which must be suitable to receive an epoxy resin overlay.

Please consult Altro or FeRFA Guide to the Specification and Application of Synthetic Resin Flooring for further information.

Substrate preparation

Treatment of local repairs such as cracks and holes, improvement or modification of levels and removal of high spots, should be undertaken prior to the final installation of an Altro Resin system.

Altro Patch should be applied to a prepared and primed surface. Altro offer a range of primers depending on the substrates requirement.

Surface preparation is the most vital aspect of resin flooring application. Inadequate preparation will lead to loss of adhesion and failure. The substrate in question will dictate the method of preparation. In the case of a concrete floor, preparation by dust enclosed diamond floor grinder may be appropriate, or if of a sufficient area for economic reasons, should be lightly shot blasted to leave a textured surface free from contamination.

Planning

Before proceeding with the installation, careful consideration should determine the best way of installing the Altro system. Efforts should be made to minimise day joints and optimise the open time of the product (i.e. minimise the distance between mixing and laying). Time spent at this stage will be invaluable towards the success of your installation.

Altro recommend that stainless steel mixing, laying and application tools are used in this process. Metal transfer from mild steel tools may result in discolouration of the screed which may be unacceptable to your customer.

Application

The following application guide is based on laboratory and simulated site conditions. However, when the installation conditions differ appreciably from those detailed by Altro, the performance characteristics of both mixing and laying may not be as expected. To achieve the best results at all times please endeavour to establish the correct conditions which in turn will allow the materials to be laid effectively, and meet your customers' expectations.

Installation conditions

Apply in well ventilated areas. Both the slab and air temperature should be between 10°C and 25°C. It is not advisable to mix and lay epoxy resin products outside of this range. Ambient conditions should be maintained at least 3°C above dew point or below 75% R.H. during the initial stages of cure. At site temperatures below 10°C cure times will be substantially increased unless some form of external heating is used. It must be recognised that the concrete slab temperature will generally be lower than the air temperature, often as much as 10°C, and this will govern the rate of cure. As the resin flooring cures, in condensing conditions moisture vapour may condense onto the surface and cause 'blooming', a permanent clouding of the surface. Cold, wet or humid conditions, and limited air-flow, can result in condensation on the part-cured floor. The workability, open-time, cure development and return to traffic will be significantly affected by ambient conditions.

Mixing equipment

- Slow speed drill (200-500rpm), such as MM17 *
- Mixing paddle, such as MR2 60B *
- Forced action mixer (stainless blades), such as RM65 *
- Stainless mixing vessel, such as RM65 drum *

* All tool number references relate to Refina Ltd 01202 632 270

Priming the substrate

In order to maximise substrate adhesion, primer should be used. An Altro primer should be selected which is suited to the installation, and appropriate for the nature and moisture content of the substrate (seek further guidance from Altro).

The appropriate Altro primer should be applied in accordance with the product data sheet.

Ensure that the substrate is well sealed and that all hungry areas are addressed before proceeding to install the Altro Patch. The Altro Patch should be applied into a tacky primer.

Product installation

Using a slow speed drill and paddle or Daines type mixer thoroughly mix together the filled resin part with the full contents of the hardener container and mix for 2 minutes.

Excessively vigorous mixing should be avoided as this can lead to undesirable air entrainment.

Care should be taken to ensure that any material adhering to the sides, bottom and corners of the mixer is thoroughly blended in.

Remember to always use the correct PPE.

Using a clean stainless steel trowel apply the Altro Patch to the tacky primer. Compact well and finish flush to the surrounding areas.

Joints

The spacing of movement joints must be determined by the design of the subfloor. All live movement joints in the subfloor must be continued through the resin flooring, failure to do so will result in live cracks being reflected through the resin finish. In all instances the type and positioning of movement joints should be agreed at the design stage between all parties concerned. Please refer to Altro or FeRFA's Guide to the Specification and Application of Synthetic Resin Systems for further guidance. All joints should be filled with Altro Expand flexible jointing compound. Please see Altro Expand datasheet for further information.

Protection

Whilst of an extremely durable nature these floor systems must be thoroughly protected from the rigours and abuse that exist during the ongoing contractual works. Untreated felt paper will suffice as protection from light traffic, however if protection is required from other trades then the following protection option should be considered. Where heavier access is required then a more suitable medium to take the loadings, such as shuttering ply or Correx by Cordek, should be placed on top of the untreated felt paper. No polyethylene sheets, linseed-treated hardboard, print or dyed card should be placed in contact with the resin surface. All joints in the protection medium should be taped, and all accidental spillages should be recovered immediately by removal and reinstatement of the protection. Damage will occur to the guidance is not followed.

Cleaning (during installation)

All tools and equipment should be regularly cleaned using Altro Solve™ EP to reduce build up and maintain the quality of the installation. Avoid contamination of the resin surface with solvent as this may cause localised bloom to occur. **Ensure that the correct PPE is worn at all times.**

Disposal

Due diligence must be adopted if accidental spillages occur. Recover using absorbent granules, transferring into a suitably marked container. Disposal of all empty containers and accidental spillages should be in accordance with the local waste disposal authority.

Please refer to the most up-to-date technical documents, including safety data sheets, for the Altro resin variant prior to beginning your installation.

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NOTE: "Altro Ltd" ("Altro") endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, where Altro has no control over the selection of its products for particular applications, it is important that any prospective customer, user or specifier, satisfies him / herself that the product is suitable for the intended application. In this process, due regard should be taken of the nature and composition of the background / base and the ambient conditions both at the time of laying / applying / installing / curing of the material and when the completed work is to be brought into use.

However, as site conditions and the execution of the work are beyond our control, we accept no resultant liability.

Altro's policy is one of continuous research and development and we reserve the right to update our products and information at any time without prior notice.

If you'd like any more information or guidance please get in touch, we're here to help.

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