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## AltroPrime™ EP

Solvent-Free Epoxy Primer  
Technical and Installation data sheet

APRIL 2011

### Product Description

AltroPrime EP is a durable twin-pack solvent-free epoxy primer system/tack coat designed for bonding Altro Resin flooring systems to the existing substrate.

### Areas of Use

Applied to suitable substrates to improve adhesion and consistency of the subsequent Altro Resin flooring system.

Altro offer a range of primers to meet with all conditions. Please talk to Altro Technical services regarding the requirements of your primer.

### Areas of Use

AltroPrime EP is available in a two part composite pack in 10kg, 5kg size, 2.5 kg size and 1 kg size.

### Typical Areas of Use

Typical areas of use include:

- Under an Epoxy coatings and flow systems
- Under Polyurethane flow systems
- Under an Epoxy screed system
- Under a polyurethane screed

### Advantages

- Easy to apply
- Low odour
- Excellent adhesion

### Sustainability

Altro 6 steps to sustainability program seeks to optimise our performance with respect to the planet's resources. Please refer to [www.altro.com](http://www.altro.com) for further information.

### Chemical Resistance

AltroPrime EP affords excellent 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 coating. Please refer to Altro, and FeRFA Guidance Note No.3 for further information.

## Typical Physical Properties

<b>Speed of Cure</b>	<b>Full Cure</b>	<b>7 days @ 20°C</b>
<b>Application Temperature</b>		<b>10°C to 25°C</b>
<b>Usable Working Life</b>		<b>20-30 minutes @ 20°C</b>
<b>Intercoat Period</b>		<b>10 to 48 hours @ 20°C</b>
<b>Bond Strength</b>	<b>Adhesion to Concrete</b>	<b>&gt;3.5 N/mm<sup>2</sup></b>
<b>Coverage</b>		<b>Average 4.8 m<sup>2</sup>/kg* See note</b>

### Coverage

1 kg unit:

1st coat	4.8m <sup>2</sup> /1 kg
2nd coat	6 m <sup>2</sup> / 1 kg

2.5 kg unit:

1st coat	12m <sup>2</sup> / 2.5 kg
2nd coat	14.4.m <sup>2</sup> / 2.5kg

5 kg unit:

1st coat	24 m <sup>2</sup> /5 kg
2nd coat	29 m <sup>2</sup> / 5 kg

### Note

The coverage rate of AltroPrime EP will be directly dependant on the porosity and profile of the substrate as well as other contributory factors such as ambient and substrate temperature.

Stated coverage rates should be referred to for guidance only and cannot be relied upon to determine exact quantities.

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

### Suitable Substrates

AltroPrime EP may be applied to a variety of substrates including, but not limited to, concrete, polymer-modified cementitious screeds, terrazzo, 25mm WBP 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-hydrate 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 to achieve 26N/mm<sup>2</sup> compressive strength (BS EN 12504-2:2001) and surface tensile strength 1.5N/mm<sup>2</sup> (BS EN 13892-8:2002). Substrates must include an effective damp proof membrane and contain residual moisture not greater than 5% by weight (75% R.H.) to BS 8203:2001 (see AltroProof™ for installations above 75% R.H.).

Because of their method of application, synthetic resin floorings such as AltroPrime EP will inevitably follow the profile of the underlying substrate. Variable porosity and profile of the substrate will affect coverage rates. Please consult Altro or FeRFA Guide to the Specification and Application of Synthetic Resin Flooring for further information.

### Substrate Preparation

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. If the floor has been treated with a cementitious surface improver, then the surface should be prepared in accordance with the manufacturer's recommendations, or abraded with an STR machine followed by thorough vacuuming.

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 flooring installation. Thin coatings reflect the surface texture. High spots may lead to local premature wear. Excessive profiles as a result of inappropriate surface preparation may significantly affect application, coverage and performance.

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

## 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).

It is best to also consider the effect of external influences on the final installation. Time spent at this stage will be invaluable towards the success of your installation.

The AltroPrime EP system is designed to be laid at a nominal 150-200 micron thickness.

## Application

The following application guide is based on laboratory and simulated site conditions. However, when installations 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 customer's expectations.

## Installation Conditions

Apply in well ventilated areas. Both the slab and air temperature should be greater than 10°C and rising, up to 25°C. It is not advisable to mix and lay epoxy resin products outside the range 10°C to 25°C. 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.

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## Mixing Equipment

- Slow Speed Drill (200-500rpm), such as MM17 \*
- Mixing paddle, such as MR2 60B \*

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

## Product Installation

Use a drill and paddle. Pour all of the hardener into the base and mix for 2 minutes. Excessively vigorous mixing should be avoided as this can lead to undesirable air entrainment. If the mixing area is not adjacent to the laying area the time required to transfer the mixed material will reduce the open installation time. **Remember to always use the correct PPE.**

Pour all the mixed material into either a large roller tray, or lay a river of the material onto the prepared substrate. Using either a low-loss medium pile synthetic roller, or dense foam rubber squeegee, distribute the material evenly and uniformly to fully treat the surface. Finish using a roller to ensure that a uniform and even coverage is achieved. Allow the system to cure for a minimum of 18 hours at 20°C, but no longer than 48 hours at 20°C before over-coating. If the over-coating time period is exceeded, the surface should be lightly abraded and vacuumed before further coats are applied.

After cure ensure that all substrate porosity has been satisfied if necessary a second coat of AltroPrime EP should be applied to ensure that the substrate is fully sealed.

If the AltroPrime is to be overlaid with a screed then the AltroPrime should be lightly seeded with dry sharp angular 0.7mm – 1.2 mm quartz sand.

Do not seed the primer if you are going to overlay with a self levelling flow system.

Ensure good air-flow and ventilation to assist with cure.

If the AltroPrime EP is to remain open for greater than 48 hours prior to topping lightly abrade the cured AltroPrime EP prior to over coating.

## 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. 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 AltroExpand™ flexible jointing compound. Please see AltroExpand 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 system if ignored.

## Cleaning (during installation)

All tools and equipment should be regularly cleaned using AltroSolve™ EP to reduce build up and maintain the quality of the installation. 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.

## Cleaning Guidance (For the completed Altro Resin system)

- Sweep or vacuum the floor to remove debris
- For normal cleaning, dilute an alkaline detergent such, as AltroClean™ 44 or similar, by 1:40 in clean water
- Alternatively, dilute by 1:20 for infrequent heavy cleaning
- Liberally apply the water and detergent solution to the floor, scrubbing with a soft-bristle brush or slow-speed (< 400rpm) cleaning machine with a white soft-medium pad for smooth, gloss floors, or using a deck scrubber or scrubbing machine for textured floors
- Pay particular attention to areas where residues may accumulate, such as internal corners of perimeter coves and around columns etc
- If possible, allow the detergent solution to remain on the floor for several minutes to break down deposits, but not sufficiently long to allow the solution to evaporate, it should be agitated by brushing/scrubbing during this time
- Remove the solution by wet vacuum recovery and follow this with a fresh water rinse, or rinse the solution into drains if permissible
- It is important that all detergent residue is removed from the textured surface of the floor. Detergent may become slippery which affects safety, or sticky which attracts and holds more dirt

**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.

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