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Altro Mosaic™ System

Multi-colour decorative floor finish system
Nominal thickness 1.25 mm

JUNE 2011

Product Description
FeRFA Type 4

Altro Mosaic is a solvent-free epoxy resin combination system that encapsulates decorative acrylic flakes in AltroTect™ Clear epoxy resin. Select from two distinctly different systems, one offering a vibrant glossy finish the other a subtle glazed smooth appearance.

Altro Mosaic Texture - Uses a base of high build coloured epoxy, AltroTect Coloured with a full scatter of multi-coloured paint flakes sealed with two coats of AltroTect Clear to leave a textured high gloss finish.

Altro Mosaic Glaze - AltroTect Coloured with a full scatter of multi coloured paint flakes sealed with three coats of AltroTect Clear and a final seal of AltroSeal™ UVR-WB, to leave a glazed matt finish.

Standard Colours

Altro Mosaic Systems are available in a range of 15 standard colours.
Please see the brochure or colour card for full range.

Sustainability

Contains post-consumer recyclate reducing its impact on the environment. Altro 6 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.

Typical Areas of Use

Typical areas of use include:

- Communal areas
- Walkways
- Corridors
- Offices
- Shops

Advantages

- Low odour
- Good chemical resistance
- Good abrasion resistance (to general light traffic)
- Optional finishes
- Ease of cleaning

Chemical Resistance

Altro Mosaic affords excellent resistance to a range of commonly used chemicals. However, premature or prolonged 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

Speed of Cure	Light Foot Traffic	24 hours @ 20°C
	Full Cure	7 days @ 20°C
Application Temperature		10°C to 25°C
Usable Working Life		30 minutes @ 20°C
Intercoat Period		18 to 24 hours @ 20°C
Surface Tensile Strength	Onto Concrete	> cohesive strength of the concrete

Packaging

AltroTect coloured is available in a 6.3kg two-part composite pack.
Flakes available in a 5kg bag.
AltroTect Clear is available in a 5.3kg two-part composite pack.

Coverage

AltroTect coloured 1st coat 20m²/6.3kg
Altro Mosaic 250g/m²
AltroTect clear 1st seal coat 20m²/5.3kg
AltroTect clear 2nd seal coat 25m²/5.3kg
AltroTect clear 3rd seal coat 25m²/5.3kg
AltroSeal UVR-WB 42m²/5kg

Material usage is dependent upon temperature, surface profile and porosity; the stated coverage rates should be referred to for guidance only and cannot be relied upon to determine exact quantities. Priming of porous substrates will improve the coverage rates. Pale colours may require additional coats to cover a dark substrate.

Although stringent quality assurance processes are employed, when colour consistency is essential a single batch must always be used where possible.

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

The Altro Mosaic system can be applied to a variety of substrates including, but not limited to, concrete, polymer-modified cementitious screeds and terrazzo. 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 to achieve 26N/mm² compressive strength (BS EN 12504-2:2001) and surface tensile strength 1.5N/mm² (BS EN 13892-8:2002). Substrates must include an effective damp-proof membrane and contain residual moisture not greater than 5% by weight (75% RH) to BS 8203:2001 (see Altroproof™ for installations above 75% R.H.).
Variable porosity and profile of the substrate will affect both coverage rates and final appearance.
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 will 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, and optimise the open time of the product (ie minimise the distance between mixing and laying).

It is best to also consider the effect of external influences on the final installation (i.e. direction of light from windows etc). Time spent at this stage will be invaluable towards the success of your installation.

The Altro Mosaic system is designed to be laid at a nominal 1.0 – 1.5 mm 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% RH 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 *

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

Product Installation

Using a slow speed drill and paddle thoroughly mix the base colour for 30 seconds. Pour all of the hardener into the pre-mixed base and mix for a further 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 roller tray. Using either a low-loss medium pile synthetic roller, or dense foam rubber squeegee, distribute the material evenly and uniformly to fully coat the surface. Finish using a roller to ensure that a uniform and even coverage is achieved.

Fully pre-mix the flakes until they are uniformly distributed, prior to blinding the floor.

Wearing spiked shoes immediately fully blind the wet AltroTect™ with the flakes. Care must be taken to completely obliterate the wet AltroTect with the knowledge that as this is high build coating some of the flakes will be fully absorbed into the coating. When finished go back and over blind areas where the flakes have become overly absorbed into the AltroTect.

NOTE it is very difficult to scatter flakes across a floor evenly; a full blind is the only way to get even coverage of flakes.

Allow the system to cure for a minimum of 18 hours at 20°C, but no longer than 24 hours at 20°C.
Remove all excess flakes by brush and vacuum. Take care at this stage to fully remove any loose flakes.
The system must be sealed with AltroTect Clear. Ensure the surface of the resin screed is contamination free and all loose flakes are removed and thoroughly vacuumed as necessary. Pour the contents of the hardener into the base unit, and using a slow speed drill and paddle thoroughly mix the contents for 2 minutes. Apply the AltroTect Clear to the system using a dense polypropylene foam squeegee or short nap roller, taking time to ensuring that all the flakes are covered. Roll the surface with a short nap synthetic roller to remove all excess and leave to cure for not longer than 24 hours at 20°C. Mix and roller apply the following AltroTect Clear coat(s) to leave a uniform closed film across the floor where all excess is removed. Failure to remove excess may affect the slip resistance and appearance of the finished system.
The Glaze system incorporates a third coat of AltroTect Clear and a final AltroSeal™ UVR-WB to achieve a cosmetic matt finish. The application of a single coat of AltroSeal UVR-WB can be applied not more than 24 hours at 20°C following the final seal. Pour the contents of the hardener into the base unit, and thoroughly mix using a slow speed drill and paddle for 2 minutes. Apply a very thin coat using a short nap synthetic roller applying the product to the floor from a paint tray. Heavy application of this seal will result in an opaque appearance of the finished floor; therefore care is required in its application.
Ensure good air-flow and ventilation to assist with cure.
Enough time should be given to allow the AltroSeal UVR-WB to reach its full chemical cure. Physical drying of the surface alone is not indicative of the full cure properties including wear and chemical resistance.

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.
The resin floor should reach full chemical cure in 7 days at 20°C. 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. The resin system should have cured for at least 48 hours prior to placing the protection. 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. 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 inert 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

Optimum slip resistance can only be maintained with regular cleaning.
The texture of the surface will require mechanised cleaning with an Altro Unipad™ or the use of a long-handled scrubbing brush; mop cleaning will not be effective. Steam cleaners and/or hot pressure cleaners should not be used on the floor or walls. A cold/ambient pressure washer may be used if required, but the pressure should not exceed 1400psi. Warm water will offer improved cleaning, but the water temperature should not exceed 60°C.

- 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 deck scrubber or slow-speed (< 400rpm) scrubbing machine fitted with an Altro UniPad™ or similar
- 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
- 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 residues are removed from the textured surface of the floor. Detergent may become slippery which affects safety, or sticky which attracts and holds more dirt

AltroClean 44 and Altro UniPads are available through Resins Sales Desk.
Please obtain the correct MSDSs from Altro prior to beginning the installation.

To Order E-mail ResinSalesDesk@altro.com
Call 01300 320620
Fax 01300 321122