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Altro Seal™ water-based matt

Cosmetic matt seal coat
Technical and installation data sheet

October 2016

Product description
FeRFA Type 1

Altro Seal water-based matt variant is a polyurethane resin seal that is easy to apply and provides a cosmetic clear matt finish when used over the following Altro resin systems.

- Altro Flow™
- Altro Screed™
- Altro Mosaic™

Advantages

- Matt finish
- Easy to apply
- Cost-effective
- Fast drying

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 Seal water-based matt offers 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 screed. Please refer to Altro and FeRFA Guidance Note No.3 for further information.

Typical physical properties

Slip resistance	Altro Seal water-based matt is a cosmetic topcoat and as such the slip resistance will be determined by the resin system it is applied to	
Speed of cure	Light foot traffic	48 hours @ 20°C
	Full cure	7 days @ 20°C
Application temperature		10°C to 25°C
Usable working life		30 minutes @ 20°C

Packaging

Altro Seal water-based matt is available in a 5 kg, two-part composite pack.

Coverage

Altro Seal water-based matt

Single coat 100m^2 per 5kg unit

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.

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

Altro Seal water-based matt can be applied over an installed Altro resin system. 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.

Suitable requirements

The surface should be dry as well as being free from any contamination that may affect the adhesion of Altro Seal water-based matt. Resin surfaces that have been left for more than 24 hours prior to the application of Altro Seal water-based matt will need suitable preparation in order to promote adhesion. When applying to new or existing Altro Flow the surface will require preparation with Altro Siliclean.

Substrates to achieve 26N/mm^2 compressive strength (BS EN 12504-2) and surface tensile strength 1.5N/mm^2 (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

For application onto existing Altro resin systems.

Screed systems: When applied to an Altro Screed system the surface should be clean and free from contamination that could affect the adhesion of the Altro Seal water-based matt. If the Altro Seal water-based matt is to be applied within 24 hours of the previous Altro resin application then the coating should be applied directly to the previous layer. If more than 24 hours has elapsed since the application of the previous layer then the surface may require light mechanical abrasion and will need to be wiped over with Altro Solve™ EP.

Flow systems: All Altro Flow systems should be cleaned either using Altro Solve EP or Altro Siliclean to remove additives that could affect the adhesion of the Altro Seal water-based matt. 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 (i.e. direction of light from windows etc.). Time spent at this stage will be invaluable towards the success of your installation.

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. Enough time should be given to allow the Altro Seal water-based matt 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.

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 polyurethane 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 temperature and humidity.

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 fully mix the base first to incorporate the matting agent before adding the hardener. Thoroughly mix using a slow speed drill and paddle 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. 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**.

To achieve a cosmetic matt finish, the application of a single coat of Altro Seal water-based matt can be applied not more than 24 hours at 20°C following the final seal. Apply a very thin coat using a short nap synthetic roller applying the product to the floor from a paint tray. Over thickness of this seal will result in an opaque appearance of the finished floor, therefore care is required in its application. When applied by roller to very rough substrates care must be taken to avoid the formation of puddles which under certain circumstances can result in a non clear coating.

Ensure good air-flow and ventilation to assist with cure. Enough time should be given to allow the Altro Seal water-based matt 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 Altro Expand™ flexible jointing compound. Please see Altro Expand data sheet for further information.

Protection

Whilst of an extremely durable nature these floor systems must by 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 48 hours prior to placing the protection. No polyethylene sheets, linseedtreated 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 the above guidance is not followed.

Cleaning (during installation)

All tools and equipment should be regularly cleaned using Altro Solve PU 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. **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 and appearance can only be maintained with regular cleaning. Floors with slip resistance will require mechanical cleaning; wet loop mop cleaning will be less effective but may be sufficient for routine maintenance of floors with a smooth surface. Microfibre cleaning systems should be sufficient for routine maintenance of floors with a smooth surface provided that a suitable detergent/dosage is used and the microfibre pads are changed with sufficient frequency to ensure their effectiveness. 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.

Entrance matting will reduce cleaning requirements and should also enhance the longevity of the floor, when combined with correct maintenance.

- Sweep or vacuum the floor to remove debris
- For normal cleaning, dilute an alkaline detergent such, as Altro Clean 44 or similar, by 1:40 in clean water
- Alternatively, dilute by 1:10 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 and 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 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

Altro Clean 44 and Altro Unipads are available through the Resins Sales Desk.

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

To order E-mail ResinSalesDesk@altro.com

Call 01300 320620

Fax 01300 321122

If you'd like any more information or guidance
please get in touch, we're here to help.
tel: 01462 707604 fax: 01462 707515
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