

## M12 RESIN FLOORING

To be read with Preliminaries/ General Conditions

### TYPE(S) OF FLOORING

#### 110A RESIN FLOORING

- Project:
- Location:
- Substrate:
- Preparation:
- Resin flooring system:
- Manufacturer: ALTRO RESIN SYSTEMS, Unit 3, Station Road
- Industrial Estate, Maiden Newton, Dorchester, Dorset, DT2 OAE
- Primer reference: **Altro Prime static-dissipative**
- Resin flooring reference: **Altro Screed 4mm static-dissipative- FERFA Type 6**
- Application: **4mm** Nominal thickness
- Colour: TBA
- Accessories:
- Resin skirting's / upstands:
- Surface finish: In strict accordance with manufacturer's instructions.
- Flatness/Surface regularity:
- Sudden irregularities: Not permitted.
- Classification of surface regularity to BS 8204-6:
- SR1 - High
- SR2 - Normal
- Other requirements: **Please refer to Technical Data sheet in association with this specification.**

**This specification, in whatever format - electronic, is only valid if it is a true copy of the filed paper copy held at Altro. If you are in any doubt as to the authenticity of the copy, please ask for verification.**

### PREPARATION OF SUBSTRATES

#### 210 TESTING MOISTURE CONTENT OF SUBSTRATES

- Drying aids: Remove minimum four days prior to test.
- Test: To BS 8203, Annex A using an accurately calibrated hygrometer.
- Location of readings: Corners, along edges, and at various points over the test area.
- Relative humidity before laying resin flooring (maximum): **75% R.H.**

#### 210A SURFACE APPLIED DAMP PROOF MEMBRANE

- Manufacturer and reference: **Altro Proof standard, epoxy surface damp proof membrane by Altro Floors effective up to 97% R.H.**  
**NB:** Please note Altro Proof fast-track is also available where floor coverings are to be laid same day. Conditions apply.
- Apply in accordance with manufacturer's instructions.  
**In the event of underfloor heating please consult Altro Technical for conditions of use.**

**Please note AltroProof is an insulated substrate. Refer to clause 230A for further details on preparation.**

#### 220 SURFACE HARDNESS OF SUBSTRATES

- General: Substrates must restrain stresses that occur during setting and hardening of resin and in service.
- Test for surface hardness: To BS EN 12504-2 using a rebound hammer to ensure that a minimum strength of **26 N/mm<sup>2</sup>** is achieved. Surface tensile strength **>1.5N/mm<sup>2</sup>**.
- Areas of non-compliance: Submit remedial proposals for repair or cut out and replacement.

#### 230A PREPARATION OF SUBSTRATES GENERALLY

- Chases/ Saw cuts: Cut/ break out at skirtings, free edges, movement joints, etc. for termination of resin flooring.
- Blow holes, cavities, cracks, etc: Fill with repair product recommended by resin flooring manufacturer.
- Cleanliness: Remove surface contaminants, debris, dirt and dust.
- Texture of surface: Suitable to accept resin flooring and achieve a full bond over the complete area.
- All live movement / crack induced joints should be brought through the resin and infilled with colour matched **Altro Expand**. (**Altro Prime standard** contact surfaces)

#### **Special Notes:**

**On ground concrete at earth potential: an earthed perimeter strip of copper continuity strip should be installed and tested before installation.**

**On insulated subfloors: A grid of earthed copper tape should also be provided and laid at 4 metre centres.**

**Copper tape should be locally primed to prevent air bubbles escaping through the coating.**

**Substrates may need to be primed to improve the adhesion of the self-adhesive tape.**

#### 230B SUBSTRATES TYPES AND PREPARATION

- **Concrete:** Prepare the subfloor by lightly encapsulated bead blasting with vacuum dust recovery (grade to be established by installer) alternatively a high speed diamond grinding machine with vacuum recovery may be used.
- **Sand & Cement Modified Screed:** Prepare by means of rotary grinding m/c fitted with silicon carbide pads or tct discs fitted with vacuum recovery system to expose clean aggregate.
- **Timber Surface – RBP – Stable system only:** Remove all contamination and using vacuum controlled recovery sanding machine. (Seek Altro advice for recommended construction detail)
- **Metal Surface – Mild Steel:** Shot blast ensuring full removal of oil, grease, dirt, rust, paint coatings and any other foreign matter / surface contaminant. (Paragraph 260 refers).
- **Metal Surface – Galvanised Mild Steel:** Remove any surface contaminant and thoroughly clean and degrease before applying a proprietary etch primer in accordance with manufacturer's instructions.

**Others include: Terrazzo, Granolithic, Stone. Please consult Altro Technical Services for compatibility and preparation requirements.**

**NB: In the event of underfloor heating please consult Altro for further guidance.**

After preparation surfaces should be free from laitance, friable materials and contamination. The area should be thoroughly vacuumed to remove any remaining dust or debris.

Surface texture: Suitable to accept resin flooring and achieve a full bond over the complete area. Please note thinner resin floorings (coatings) will reflect the surface preparation in the finish.

- 240 EXISTING SUBSTRATES
- Preparation: Remove surface imperfections, ingrained contaminants, coatings and residues.
  - Contaminated areas: Submit proposals for removal and repair.
- 250 EXISTING TILE/ SHEET FLOOR COVERINGS
- Preparation: Remove coverings, residual adhesive, bedding, grouting and pointing.
- 260 METAL SUBSTRATES
- Cleaning: Shot blast to BS EN ISO 8501-1, grade Sa2.5.
  - Treated surfaces: Clean. Free from visible oil, grease and dirt, mill scale, rust, paint coatings and foreign matter.

## LAYING FLOORING

- 310A WORKMANSHIP
- Operatives: Trained/ Experienced in the application of resin floorings.
  - Evidence of training/ experience: on request.
  - Fillers and incorporated aggregates: Thoroughly mix in to ensure wetting. Avoid over-vigorous mixing resulting in excessive air entrainment.
  - Scattered aggregates: (where appropriate) Broadcast onto wet surface of resin.
  - Appearance: Consistent.
  - Curing: Allow appropriate periods between coats, before surface treatments, and before trafficking/use in accordance to manufacturer's instructions.
  - Health & Safety: Refer to MSDS's. FERFA publication: Guide to PPE for use with in Situ Resin Floors and Surface Preparation.
- 320 CONTROL SAMPLES
- Complete areas of finished work in the following locations:  
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- 320A SAMPLES
- General: Ensure that representative samples are provided (available from Altro) to the nominated sub-contractor in order to avoid any uncertainty over the expected finish.
- 330A PRIMING: CONCRETE / MODIFIED & POLYMER SCREEDS / RBP
- Apply coat of **Altro Prime static dissipative** to the prepared surface at a rate of 24m<sup>2</sup> / 5kg to leave an even closed film across the sub-floor using a medium pile roller (ensure that the substrate is fully satisfied and sealed) and whilst still wet fully broadcast/blind out with **Altro conductive aggregate**, at a guide coverage of 17m<sup>2</sup> / 25kg. Leave to cure for a maximum of 24 hours. Remove excess and loose material by means of industrial vacuum.
- 330B PRIMING: MILD STEEL
- After preparation an acetone wash should firstly be used to thoroughly wipe area. **Altro Prime static-dissipative** should then be applied before any oxidation takes place in accordance with manufacturer's instructions to leave an even closed film over floor area using a medium pile synthetic roller (ensure the substrate is fully sealed) and whilst still wet lightly seed with Altro Conductive
  - Aggregate. Leave to cure for a maximum of 24 hours.
- 340 REINFORCEMENT
- Fabric: **Promesh Grade 5** glass fibre or similar as local reinforcement.
  - Locations: Bay joints.
  - Laps: (Minimum) 50mm ether side.
  - Bedding: Roll into prime coat.
- 357A TROWEL APPLIED SCREEDED RESIN FLOORING
- Apply **Altro Screed 4mm static-dissipative** at a maximum thickness of **4mm** to primed surface using a stainless steel trowel (or approved screed box) taking care to compact and close the surface evenly, ensuring that trowel marks are kept to a minimum. Allow to cure for maximum of 24 hours prior to seal coat application.

Curing:	
Light Foot Traffic	24 hours@ +20°C
Medium	48 hours @ +20°C
Full Chemical Cure	7 days @ +20°C

#### 380A SURFACE SEALER

- After thorough de-nibbing and vacuuming of cured quartz screed apply a coat of **Altro Screed standard seal coat** using dense polypropylene foam squeegee, working the seal into the surface, ensuring that porous areas of screed are fully satisfied. Roll surface with short nap synthetic roller to leave a uniform and even surface. Allow to cure for not longer than 24 hours. Mix and roller apply a tight finishing seal coat to leave an even closed film across the floor. **NB:** Failure to remove excess may affect the slip resistance and appearance of the finished system. DO NOT flood seal, as this can cause staining and discolouration.

#### 380B COSMETIC MATT SEAL. (Optional)

- Apply a very **thin** coat of **Altro Seal water-based matt** with a short nap 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.

#### 390 SLIP RESISTANCE TESTING OF FINISHED RESIN FLOORING

- Standard: To BS 7976-2.
- Timing: Give notice.
- Notice period (minimum):
- Results: Submit pendulum test values (PTV's), for both wet and dry states.

#### 400 BOND STRENGTH OF RESIN FLOORING

- Contact surfaces: Substrate and fully cured resin flooring.
- Bond: In accordance with manufacturer's performance data.
- Test: To BS 8204-6, clause 11.4 and BS EN 1542.

#### 410 RESIN SKIRTINGS/UPSTAND

- Quality: **Altro Screed Quartz 4mm standard. To include surface sealer to match floor finish applied in accordance with manufacturer's instructions.**
- Colour: As flooring.
- Profile: Radius cove.
- Top edge: Retain with a stop bead.
- Transition with resin flooring: \_\_\_\_\_

#### 410A SUBSTRATE

- To be a sound, stable structure incorporating a satisfactory damp proof membrane in accordance with the Code of Practice BS8000 where applicable. The type of construction suitable to receive Altro resin cove detail being either: flush jointed brickwork / blockwork, cement/polymer rendered brickwork / blockwork, 18mm R.B.P. (Resin Bonded Ply – fixed securely to a stable background) or insulated sandwich partition with stainless expamet mechanically fixed at cove detail.

#### 410B MOISTURE CONTENT

- Where applicable the moisture content of the substrate construction should not exceed 75% R.H. or 5% moisture content by weight.

#### 410C SURFACE PREPARATION

- Prepare existing wall surface as necessary to remove loose or friable material and leave clean, stable keyed surface.

#### 410D SPECIAL FIXING

- Using a suitable fast cure adhesive in conjunction with mechanical fixings secure **aluminium** angle bead **DURUNDELL DRE 60 SP** to a minimum height of **100mm**. As we do not manufacture this product we recommend you contact Dural UK Ltd Tel: 01924 360110.

#### SPECIAL FIXING

- Using a suitable fast cure adhesive in conjunction with mechanical fixings secure **stainless steel** angle bead **DURONDELL DRE 60** to a minimum height of **100mm**. As we do not manufacture this product we would recommend you contact Dural UK Ltd Tel: 01924 360110

#### SPECIAL FIXING

- Using a suitable fast cure adhesive in conjunction with mechanical fixings secure **aluminium** birds beak **BB45 AN** to a minimum height of **100mm**. As we do not manufacture this product we recommend you contact Dural UK Ltd on 01924 360110.

#### SPECIAL FIXING

- Using a suitable fast cure adhesive in conjunction with mechanical fixings secure **stainless steel** birds beak **BB45 IL** to a minimum height of **100mm**. As we do not manufacture this product we would recommend you contact Dural UK Ltd on 01924 360110.

#### SPECIAL FIXING - WHITEROCK

Altro Whiterock hygienic PVCu wall cladding installed to a minimum **100mm** height from floor, finished into Altro Whiterock PVCu resin transition joint strip (G834/25)

- Drawing reference WF6 refers.

#### 410E PRIMING

- Apply a coat of **Altro Prime standard** to leave an even closed surface and lightly seed with 0.7-1.2mm quartz aggregate and leave to cure. Re-prime area applying **Altro Prime standard** (1kg unit) modified with Altro TX (0.5 Litre) to produce a paste consistency, and apply to provide a uniform liberal coating to the pre primed area.

#### 410F COVING INSTALLATION

- Whilst the modified primer is still tacky apply **Altro Screed 4mm standard** coving to form coved skirting with a 35mm radius and at height set by special fixing. Top edge tucked into the angle bead with the bottom edge finished to match floor thickness detail and leave to cure.
  - Drawing reference RF7/RF8 refers.

#### 410G JOINTS

- All vertical joints to be transferred through the cove detail and in-filled with **Altro Expand vertical**. (**Altro Prime standard** contact surfaces)

#### 420 FREE EDGES OF RESIN FLOORING

- Transition to abutting floor finishes: Straight and smooth. Surfaces should be primed using **Altro Prime standard**. Where applicable suitable transition strip may be used between different surfaces. Recommendations available upon request
- Retention of exposed resin edges: Chamfer edges to a depth of 1.5 times the nominal thickness of the system being installed to allow for toeing in.
  - Drawing reference RF4 refers.

#### 430 SEALANT MOVEMENT JOINTS

- Location: Centre over movement joints in substrate.  
Preparation and application: Method: Cut required chases mechanically and pack out the cut groove with flexible packer (flooring contractor's choice) before applying sealant.
- Joint width and depth to be agreed before installation.
- Sealant: **Altro Expand**. (**Altro Prime standard** contact surfaces)
- Colour: Matched to resin).
  - Drawing reference RF1 refers.

#### 440 STRIP MOVEMENT JOINTS

- Location: Centre over movement joints in substrate.
- Retention of resin edges: \_\_\_\_\_

- Joint width: \_\_\_\_\_
- Strip:
  - Manufacturer:
  - Product reference: \_\_\_\_\_
  - Insert type: \_\_\_\_\_
  - Colour: \_\_\_\_\_
  - Fixing: To exact finished level of resin flooring.

#### 445 CLEANING & MAINTENANCE

- The frequency and procedure of cleaning and maintenance associated with this flooring system should be established with the Client/End User and carried out in accordance with the Altro Resin Flooring Cleaning and Maintenance Recommendations which are available upon request.

##### SMALL / LIGHTLY SOILED AREAS

Scrub with a hand held deck scrubber.

##### LARGE / HEAVILY SOILED AREAS

Mechanical scrubbing machine (using brushes).

#### 450 PROTECTION TO HANDOVER

- 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. Sufficient cure must take place before the protection is placed. The use of untreated felt paper or plain cardboard where light access is required should be considered. Where heavier access is required then a more suitable medium to take the loadings should be considered, such as shuttering ply or Correx by Cordek placed on top of the felt paper. All protection medium joints 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 guidance is not followed.

#### 455 SITE CONDITIONS

- It is imperative that the correct site conditions prevail to ensure that the installing Contractor can maximise the opportunity of installing the Altro resin flooring system to a high standard. The correct lighting and temperature, together with the absence of all other trades for the duration and cure of the product will ensure its specified performance value will meet the Client's expectations.