

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 Consolidating Primer or AltroProof**
- Resin flooring reference: **AltroCrete PU Excel HF – FERFA Type 8**
- Application: **5mm** 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.**

110B 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 Consolidating Primer or AltroProof**
- Resin flooring reference: **AltroCrete PU Excel Rake / Trowel – FERFA Type 8**
- Application: **5mm** 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.**

110C 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 Consolidating Primer or AltroProof**
- Resin flooring reference: **AltroCrete PU Excel HF – FERFA Type 8**
- Application: **8mm** 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.**

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.**
(see Altro Technical for further details)

210A SURFACE APPLIED DAMP PROOF MEMBRANE

- Manufacturer and reference: **AltroProof epoxy surface damp proof membrane by Altro Floors.**

At readings between: 75 – 95% R.H. AltroProof Solo 1 coat
 95 – 97% R.H. AltroProof Duo 2 coat

Apply in accordance with manufacturer's instructions.

NB: Do not use if subfloor contains underfloor heating.

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 **30 N/mm^{sq}** is achieved. Surface tensile strength **>1.5N/mm²**.
- Areas of non-compliance: Submit remedial proposals for repair or cut out and replacement.

230 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 **AltroExpand**. (**AltroPrime** contact surfaces)
- **Rebates**: Cut a clean rebate into the subfloor at the foot of the cove as shown in diagram reference: **RF2/07/00** using a twin diamond chase cutter fitted with vacuum recovery system (**minimum: 10mm x 10mm deep**). (Precise layout of the rebate grid to be agreed with Altro Resin Technical Services Department).
- **Day Joints**: A perimeter rebate to be provided 2 x depth and width of resin flooring.

230A SUBSTRATES TYPES AND PREPARATION

- **Concrete**: Prepare the subfloor by encapsulated bead blasting with vacuum dust recovery to provide a mechanical key with exposed coarse aggregate.. Alternatively prepare the subfloor using cylinder scarifiers (Von Arx) with TCT flails fitted vacuum recovery system to remove contamination and laitance, leaving a uniform coarse profiled surface.
- **Sand & Cement Modified Screed**: prepare the subfloor using cylinder scarifiers (Von Arx) with TCT flails fitted vacuum recovery system to remove contamination and laitance, leaving a uniform coarse profiled surface.
- **Timber Surface – RBP – Stable System Only**: Remove all contamination and using vacuum controlled recovery sanding machine. (Seek Altro advice for recommended construction detail and specification)
- **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 and Brick. 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.
- 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:

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 Consolidating Primer** to the prepared surface to leave an even closed film across the sub-floor using a medium pile roller (ensure that the sub-strate is fully satisfied and sealed) and whilst still wet lightly seed with single size **Altro Grip Aggregate** at a rate of 100g/m² (0.7 to 1.2mm), Leave to cure for a maximum of 24 hours.

330B PRIMING: MILD STEEL

- After preparation an acetone wash should firstly be used to thoroughly wipe area. **AltroProof Solo** 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 single size **Altro Grip Aggregate** at a rate of 100g/m² (0.7mm to 1.2mm). 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

- Onto the prepared primed surface apply **AltroCrete PU EXCEL HF** mixed in accordance with the manufacturers recommendations and applied at a nominal thickness of **5mm/8mm** using a steel trowel (or approved sledge) between screed rods (5mm or 8mm diameter) taking care to close the surface evenly to minimise trowel marks. Ensure the surface and the line of each gauge is uniformly closed. (Lightly back roller ONCE with short nap synthetic roller if required. DO NOT BACK ROLLER EXCESSIVELY. Leave to cure.

357B TROWEL APPLIED SCREEDED RESIN FLOORING

- Onto the prepared primed surface apply **AltroCrete PU EXCEL RT** mixed in accordance with the manufacturer's recommendations and applied at a nominal thickness of **5mm** using a skid leveller or pin leveller to leave a uniform thickness of material across the floor.

Compact the surface of the system with a large clean stainless steel trowel to provide a uniform closed surface. (Lightly back roller ONCE with short nap synthetic roller if required. DO NOT BACK ROLLER EXCESSIVELY. Leave to cure.

Curing:

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

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: **AltroCove PU.**
- 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 A45SG to a minimum height of **100mm**. As we do not manufacture this product we recommend you contact Image Trim UK Ltd, Tel. 0870 6071010.

SPECIAL FIXING

- Using a suitable fast cure adhesive in conjunction with mechanical fixings secure **stainless** steel angle bead S45SH to a minimum height of **100mm**. As we do not manufacture this product we would recommend you contact Image Trim UK Ltd, Tel. 0870 6071010.

SPECIAL FIXING - WHITEROCK

Altro resin flooring applied first and self-coved up to a minimum of **100mm** to front edge of image profile (P455L) by Image Trim UK Ltd.

- Drawing reference WF5 refers.

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 **AltroPrime EP** to leave an even closed surface and lightly seed with 0.7-1.2mm quartz aggregate and leave to cure. Re-prime area applying **AltroPrime EP** modified with **Altro TX** , and apply to provide a uniform liberal coating to the pre primed area.

410F COVING INSTALLATION

- Onto tacky primed surface apply **AltroCove PU** mixed in accordance with the manufacturer's recommendations to form coved skirting at height set by special fixing with a 38mm radius. Ensuring that the top edge is tucked into the bird beak detail, and the bottom edge into half of the floor junction rebate. Leave to cure for maximum of 24 hours.

- Drawing reference RF2/RF7 refers.

410G JOINTS

- All vertical joints to be transferred through the cove detail and in-filled with **AltroExpand V.** (**AltroPrime** contact surfaces)

420 FREE EDGES OF RESIN FLOORING

- Transition to abutting floor finishes: Straight and smooth. Surfaces should be primed using **Altro Consolidating Primer / AltroProof.** 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 2 times the nominal thickness of the system being installed to allow for toeing in (d x w).

- Drawing reference RF4 refers.

425 DRAINAGE GULLIES

- To be securely fixed into subfloor. A saw cut to be made around the perimeter of the gulley and infilled with color matched **AltroExpand (Altroprime** contact surfaces). The Altro resin topping must incorporate a reinforcing toe at the junction of the **AltroExpand.**

- Drawing reference RF5 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: **AltroExpand (AltroPrime** 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: **Gradus/Equal** Approved
 - 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. The texture of the surface will require mechanised cleaning.

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 the 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