

Altrocrete PU Excel HF

Heavy Duty Polyurethane Floor Screed (5mm or 8mm)

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Issue 1

Product Description FeRFA type 8

Altrocrete PU Excel HF is a four pack, 5mm to 8mm polyurethane heavy duty screed, based on a two-pack resin binder, separate colour pot and graded aggregates, providing exceptional abrasion resistance in combination with good underfoot traction and ease of maintenance.

Typical Areas Of Use

- Food Processing Areas
- Bakeries
- Dairies
- Breweries
- Bottling Plants
- Abattoirs/Meet Processing Plants
- Sugar Refineries
- Pharmaceutical/ Cosmetic Manufacturing
- Engineering Workshops
- Chemical Process Areas

Advantages

- Excellent Resistance to Aggressive Chemicals
- Unlikely to taint food stored in close proximity to material cured for 24 hrs at 20°C.
- Profiled slip resistance providing low potential for slip.
- Meets the European Directive on the Hygiene of Food Stuffs (93/43/EEC).
- Outstanding Impact and wear resistance.
- Good Cleanability.
- Temperature tolerant from - 40°C to + 60°C (or + 120°C intermittently from 8mm thick).
- Withstands Steam Cleaning (When Installed at 8mm)
- Impervious / Seamless (hygienic)
- Tolerant of Residual Construction Moisture

Standard Colours

Granite, Forest, Oxide, Charcoal, Ochre

Chemical Resistance

Outstanding resistance to a broad spectrum of chemicals. Including those commonly found to be problematic in the food industry. An extensive listing is shown in the chemical resistance data sheets ref, ARTD 505.

Suitable Substrates Include

Concrete, Polymer Modified Concrete, Polymer Modified Screeds, Granolithic Stone, Cementitious Terrazzo, Mild Steel Chequer Plate and 25mm Exterior Marine Plywood-(refer to Altro technical).

Substrate Requirements

The purpose of Altrocrete PU EXCEL HF is to provide a protective surface.

The substrate should be designed independently of the proposed flooring to withstand all structural, thermal and mechanical stresses and loads which will occur during service. It should remain stable whilst protected by the Altro finish, and incorporate all necessary expansion, contraction and mechanical rebates to enable it to do so. Any instability of the substrate will be reflected through the Altro finish. Recommended strength values for concrete and polymer modified screeds.

Compressive strength	>30/35 N/mm ²
Tensile strength	>1.5N/mm ²

All new substrate should have reached the above minimum strength values before the application of the Altrocrete PU EXCEL HF takes place. This will ensure the integrity of the mechanical rebates and security of the system bond.

Installation Conditions

Application should be undertaken above a minimum substrate temperature of +5°C and rising. Ambient conditions should be maintained at least 3°C above dew point or below 75% RH during the initial stages of cure to avoid condensation on the surface.

Optimum ambient and application temperatures are between 15°C and 20°C and should be maintained for the application and duration of the cure. Application below 5°C or above 30°C is generally not advisable.

Altroprime PU

To ensure that the very best finish is achieved to support both a hygienic and aesthetic finish, the prepared substrate should be primed as follows.

Altroprime PU should be applied in accordance with our recommendations, and should be allowed to cure until at least semi-set (tacky), alternatively installation may be carried out onto dry lightly seeded primer, achieved by incorporating a broadcast of a dry quartz aggregate 0.7 – 1.2mm into the wet primer prior to cure.

Note: If the ambient and or slab temperature is increasing, slab "off gassing" is likely to result in pin holing. Under these conditions further applications of primer will NOT overcome the problem. Refer to Altro technical.

Pack size	5kg
Coverage	24 m ²
(subject to surface profile and porosity)	
Over coating Times	
Minimum	12hrs @ 20°C
Maximum	24hrs @ 10°C
Pot Life	Minimum 30 mins @ 20°C

Altrocrete PU Excel

Pack Size (four components)	29.65 kg
Coverage	@ 5mm – 2.6m ²
	@ 8mm – 1.6m ²
(coverage subject to substrate profile)	

Typical Application Properties

Optimum Ambient Application Temperature
+10°C to +25°C.

Working Life	@ 10 & 20°C	20 to 25 mins
Light Traffic	@ 10°C	48 to 72 hours
	@ 20°C	17 to 24 hours
Heavy Traffic	@ 10°C	67 to 100 hours
	@ 20°C	48 to 72 hours
Full chemical cure	@ 20°C	7days

Physical Testing

Typical properties of a fully cured product

Hardness	DIN53505 Shore D
Compressive Strength	B.S. EN 13892 Part 2
Flexural Strength	B.S. EN 13892 Part 2
Tensile Strength	B.S.6319 Part 7
Bond Strength	B.S. EN 13892 Part 8
Impact Resistance	E.N. I.S.O. 6272
Taber Abrasion Resistance	D4060
Potential for Slip Wet/Dry	BS8204-6:2001 LOW

Independent Tests

European Directive on the Hygiene of Foodstuffs
93/43/EC.

Independent tests carried out by the Food Hygiene Department of Campden & Chorleywood Food Research Agency (CCFRA).

- Sensory Evaluation: - "Unlikely to taint food stored in close proximity to material cured for 24 hours".
- Water Absorption :- "No"
- Bacterial clean ability: - "Material is at least as cleanable as stainless steel, and can be deemed to have good clean ability".

Important Material Information

- Premature and prolonged contact with chemicals, including water may result in discolouration or bleaching (refer to Altro Technical).
- **Exposure to Ultra Violet light sources will cause a cosmetic yellow discolouration. This effect will be most pronounced in pale colours, and blue/grey shades (Refer to Technical).**
- At NO time should batches outside of the original order be inter-mixed.
- When matching colours to existing installations, please clarify when placing order.

Mixing Procedure

Using a forced action mixing M/C (ideally twin blade)and clean mixing vessel pour all of the base into the vessel, add the colour pot contents in total, and then the full contents of the hardener (remember to always use the correct PPE) and mix the contents for 30 seconds to blend all three components together. Add the full contents of the aggregate bag and mix for a further 2 minutes. (Longer or shorter mixing may be required subject to temperatures- Ideally a timer should be used to provide consistency). Do not leave product in mixing vessel, apply to floor as soon as possible.

Note: Double mixes are not recommended as the heat generated will reduce the working time of the product. If capacity is required then increase the number of mixing machines on site. Ensure extraction is in place to remove airborne dust when adding aggregate.

Application

Always set out the area to be laid in order that a wet edge can be maintained between each gauge (always about each gauge within 15 mins of each other).

Apply with sledge (screed box) or trowel between screed rods (5mm or 8mm dia).

Ensure the surface and the line of each gauge is uniformly closed. Light back rolling will soften any trowel marks, but will **reduce the surface profile** (one pass of the roller should be sufficient).

Note: Ambient and slab temperatures will dramatically effect the application and working time of this product. Storage of the material units are also critical to the laying performance and should be equilibrated to the installation environment before use.

Cleaning

All tools and equipment should be regularly cleaned using Altrosolve PU to reduce build up and maintain the quality of the installation. Ensure that the correct PPE is worn at all times.

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 and exposure to prolonged direct sunlight will affect the laying performance of the product.

Disposal

Due diligence must be adopted if accidental spillages occur. Recover using absorbent granules, transferring into a suitably marked container. All empty containers and accidental spillages should then be disposed in accordance with the local waste disposal authority.

Associated Data Sheets and Further Information

- Material Safety Data Sheet (COSHH)
- Design, Preparation & Installation ARTD 334
- Chemical Resistance Chart ARTD 505
- Cleaning & Maintenance ARTD 408

Health And Safety Warning

- **Wet Floors can be Dangerous; A Duty of care must Always be Exercised in Wet Areas.**

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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