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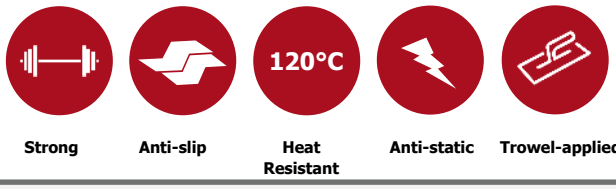
HD anti-static polyurethane floor screed

Flowdur HF A/S

Flowdur HF A/S creed with static dissipative properties for use on concrete and polymer modified cementitious screeds. Flowdur HF A/S is designed with the highest order of durability, impact, abrasion and chemical resistance. Its lightly textured finish and static dissipative properties make the product ideal for both wet and dry processing environments wherever the control of unwanted static electricity is required. Flowdur HF A/S is designed to meet the performance requirements of BS 2050 (A.4.1).



Strong | Anti-slip | Heat Resistant | Anti-static | Trowel-applied

FeRFA Classification

BS 8204 Type 8.

Colours*

Flowdur HF A/S is available in Charcoal, Chelsea Blue, Dark Grey, Green, Mid Grey, Midnight Blue and Red only.

* Flowdur HF A/S is not colour fast and may yellow over time. The rate of change will depend on UV light and heat levels and cannot be predicted. Due to the conductive carbon aggregate content, light colours are not available and the final colour will be darker than the corresponding non-A/S product. There is a possibility of shade differences between mixes if mixing times/ conditions vary. This does not compromise the product's performance or chemical resistance characteristics.

Appearance

Seamless, matt surface with a light slip resistant texture. Flowdur HF A/S contains a white aggregate which imparts a slip resistant profile to the finished floor. When first installed, the floor has a uniform coloured surface. However, with general use, the white aggregate will begin to show through giving a decorative, mottled appearance.

Pack Size

30.30 kg units comprising of: Resin, Hardener, Fibre and Aggregate.

Suitable Substrates

Concrete and polymer modified cementitious screeds.

Disclaimer: FeRFa (The Resin Association) do not consider anhydrite, hemi-hydrate, and calcium sulphate screeds to be suitable for overlayment with resin floor finishes.

Advantages

- ✓ Electrically conductive
- ✓ High chemical resistance
- ✓ Non-tainting
- ✓ Seamless
- ✓ High abrasion resistance
- ✓ Slip resistant

Temperature Resistance

Flowdur HF A/S is resistant to spillages and discharges up to 70°C when applied at 6 mm thickness. When applied at 9 mm Flowdur HF A/S is resistant to spillages and discharges up to 120 °C and is fully steam cleanable. Where thermal shock is an issue, a good quality substrate is essential.

VIRTUS RESINS
The Shippon, Faenol
Pentrecelyn
Ruthin LL15 2SP

Tel: 01978 790 744
Tel: 0843 289 8422
Email: info@epoxyresinsuppliers.co.uk
www.epoxyresinsuppliers.co.uk

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Thickness

6 – 9 mm.

Chemical Resistance

Flowdur HF is resistant to a wide range of commonly used chemicals in the food, dairy and pharmaceutical industries such as concentrated citric acid (fruits), spirit vinegar (50% acetic acid), lactic acid (food and dairy products) and common alcohols (methanol & ethanol). Flowdur HF is also resistant to a wide range of inorganic acids, fuels, hydraulic oils, mineral oils and solvents. Good housekeeping practices should be employed.

Some staining or discolouration may occur with some chemicals, depending on dwell time, temperature, type of chemical and degree of housekeeping employed. This does not affect the product's service integrity or durability.

Please consult our Technical Department for further advice.

Non-tainting Properties

Flowdur HF is water based and non-tainting (Campden & Chorleywood Food Research Association test method TES-S-002).

Typical Properties, 28 days at 20 ºC*

BS 8204-6	Type 8
Water absorption (CP-BM-2/67-2)	0 litre/m²
Adhesive strength to concrete (BS EN 1504-2):	> 1.5 MPa
Slip resistance (Pendulum Test Value BS 7976-2):	≥ 55 dry
Electrical Resistance to Ground (500 V):	
BS EN 1081 (R2)	< 10_8 Ω
BS 2050	Clause A.4.1

* The typical physical properties given above are derived from testing in a controlled laboratory environment. Results derived from testing field-applied samples may vary dependent upon site conditions. The slip resistance figures given above are affected by application techniques and prevailing site conditions. Slip resistance can reduce over time due to poor maintenance, general wear or surface contaminants. Good housekeeping practices should be observed.

Cure Schedule at 20 ºC*

Working life of full packs*	15 minutes

* Usable working life of material following mixing and immediate spreading as per the application instructions.

Cure time to light pedestrian traffic	12 hours
Cure time to light wheeled traffic	24 hours
Cure time to heavy duty traffic	48 hours
Full chemical resistance	7 days

* These cure times are approximate and given as a guide only. These times can vary due to prevailing site conditions.

Pack Size

30.3 kg units comprising of: Polyurethane Resin, Hardener, Aggregate and Fibre components.

Coverage

12 kg/m² at 6 mm or 18 kg/m² at 9 mm. Coverage figures given are theoretical. Practical coverage rates may vary due to wastage factors and the type, condition, profile and porosity of the substrate.

Application Conditions

Ideal ambient and substrate temperature range is 15 - 25 ºC. Localised heating or cooling equipment may be required outside this range to achieve ideal temperature conditions. The aggregate can be stored in a cool area (or warm area in the case of low ambient temperature) in order to control product temperature and working life. The substrate and uncured floor must be kept at least 3 ºC above the dew point to reduce the risk of condensation or blooming on the surface, from before priming to at least 48 hours after application.

Surface Preparation

Inadequate preparation will lead to loss of adhesion and failure. Grinding, light vacuum-contained shot-blasting or planing is recommended. Percussive scabbling or acid etching are not recommended. Anchorage grooves should be cut to a width and depth of twice the thickness of the floor finish at the edges, bay joints, up-stands, drains, doorways and at regular points across the floor, and all debris removed. Refer to the **Virtus Guide to Surface Preparation** for further information.

Conductive floors must be laid to a uniform thickness which may require the use of a scratch coat.

Priming

The substrate should have a relative humidity of <75% otherwise Flowprime DPM should be used. Initial priming should be carried out using Flowprime SF to isolate the substrate and provide a dust free surface to receive the copper tape. Take particular care to prime but not fill the anchor grooves. Spread onto the substrate and roll with a short-haired roller to ensure even coverage until the surface is completely wetted out, taking care to avoid pooling. Apply around the edges of and into anchorage grooves by brush to allow even spreading and avoid pooling. If, when cured, there are dry patches, a further primer coat is required. Allow to cure for a minimum 12 hours at 20 ºC. If the primer has been left to cure for >48 hours then the primer surface should be mechanically abraded and the area re-primed. Failure to do so may result in pin-holing of the surface topping

Install copper tape grid and connect earth linkage cables to the primed substrate. Apply Flowprime ESD at a rate of 0.25 kg/m^2 with a short-haired roller ensuring even coverage and avoiding pooling. When cured, ensure there are no glossy or bare patches. If so, reprime using Flowprime ESD (see separate datasheet). Where required by specification, conductivity checks should be undertaken at this point.

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Mixing & Application

Prior to mixing, the temperature of the three components must be between 15 and 25 ºC. Pre-mix the coloured resin component before use. Add the hardener component to the coloured resin component and mix using a low speed electric mixer (300 - 400 rpm) for 1 - 2 minutes until homogeneous.

Decant the mixture into a rotary drum mixer and add the aggregate component in stages, mixing for a minimum of 3 minutes until a uniform coloured, lump-free mix is obtained.

Apply to the primed areas to the required thickness using a steel float. Ensure that anchor grooves are fully wetted out and filled with material. Each mix should be mixed in exactly the same way for the same length of time to minimise the risk of shading.

The cured product should be protected from other trades using Kraft paper or similar breathable material. Polythene should not be used. Protect the installed floor from damp, condensation and water for at least 4 days.

Maintenance

Regular cleaning is essential to enhance and maintain the life expectancy, slip resistance and appearance of the floor. Flowdur HF A/S can be easily cleaned using industry standard cleaning chemicals and techniques. Consult your cleaning chemical and equipment supplier for more information. When applied at 9 mm thickness, Flowdur HF A/S is fully steam cleanable.

Health and Safety

Refer to product Safety Data Sheet before use.

Storage

Store off the ground in un-opened packs in a dry store, under cover between 10ºC and 30ºC out of direct sunlight. Protect from frost.

Shelf Life

Resin and hardener components 12 months. Aggregate component 6 months (if stored in accordance with above recommendations).

Availability

3- 5 working days. **Country of Manufacture**: United Kingdom.

Additional Requirements

Earth linkage cables should be provided by a qualified electrical engineer. Each floor area should have a minimum of two earth points to allow for redundancy or failure of one.

Joints should be bridged with copper tape to ensure electrical continuity.

The control of static electricity is a 'whole environment' problem with conductive flooring forming only one component. Care should also be given to the choice of footwear, furniture and fork lift trucks for example.

The presence of surface films can result in a loss of conductivity. It is therefore important that the surface is maintained in a clean condition with suitable cleaning materials.

Limitations

Do not proceed with application if atmospheric relative humidity is, or is anticipated to be, >90% or if the surface temperature is <3 ºC above the dew point. Application should not commence when the substrate temperature or the ambient temperature is, or is anticipated to be <5 ºC during the application or within the curing period. The design strength of concrete surfaces must be a minimum of 25 MPa compressive strength at 28 days.

The manufacture of Flowdur HF is a batch process and despite close manufacturing tolerances, colour variation may occur between batches. Products from different batches should not be used on the same surface or surfaces close together. If mixed batches are unavoidable, it is best practice to use the different batches only in areas where the colour cannot be directly compared. Touching up should only be attempted using product from the same batch using the same application methods. Product should be reserved specially for this purpose. It is recommended that touching up is carried out up to a break in the floor or surface. For further information on this or any other Virtus product, please contact our office. **Note:** The information contained in this document, and all further technical advice given is based on our present knowledge and experience. However, it implies no liability or legal responsibility on our part. In particular, no warranty or guarantee of product performance in the legal sense is intended or implied as the conditions of use and the competence of any labour involved in the application are beyond our control. Properties listed are for guidance purposes only. We reserve the right to make any changes according to technological progress or further developments.

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CE	13	DOP RV0060
EN 13813 SR-B2,0-AR0,5-IR20 Synthetic resin floor screed material for internal uses subject to reaction to fire regulations		

Reaction to fire	E_{fl} [1]	Impact resistance	IR20
Release of corrosive substances	SR	Sound insulation	NPD
Water permeability	NPD	Sound absorption	NPD
Wear resistance	AR0,5	Thermal resistance	NPD
Bond strength	B2,0	Chemical resistance	NPD

[1] According to Commission Decision 2010/85/EU of 9 February 2010, the product satisfies all the requirements of the performance characteristic 'reaction-to-fire' class E_{fl} without need for further testing.

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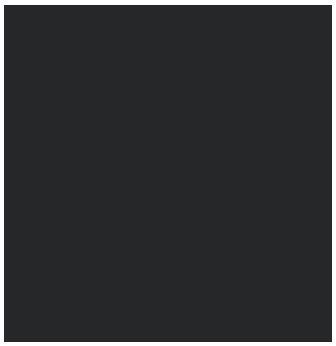
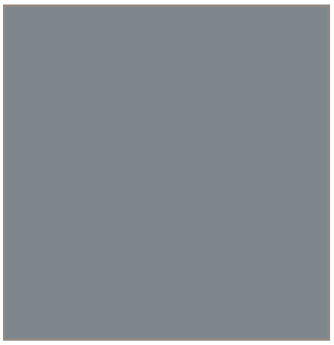
Colour Chart

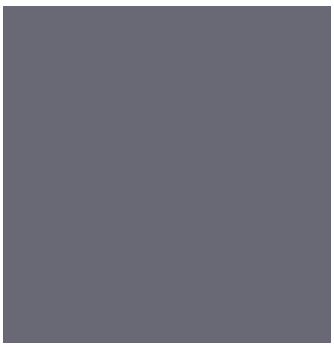
Charcoal



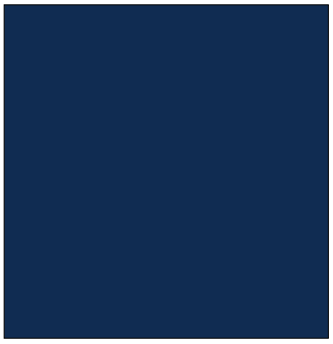
Mid Grey



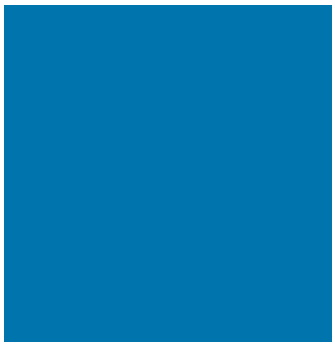
Dark Grey



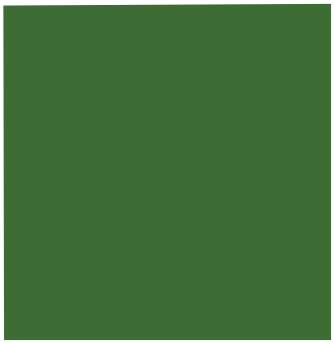
Midnight Blue*



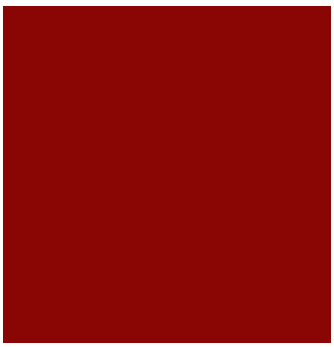
Chelsea Blue



Green



Red



Different colour variants or custom colours are available on request.

The colours shown may differ from the original product due to reprographic and technological media variations. The same colour in different products may also vary due to the composition and texture of the final finish.

Samples: If colour and final aesthetics are of concern, please contact us to request an actual hard sample of the colour and system required.

* **Surcharge applies**

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