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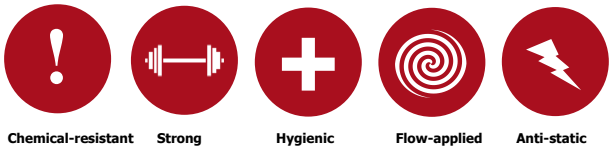
Flow-applied, static dissipative epoxy floor topping

Flowepoxy ESD

Flowepoxy ESD is a is a medium duty flow applied epoxy floor topping with static dissipative properties for use on concrete and polymer modified cementitious screeds. Flowepoxy ESD is designed with the highest order of durability, impact and abrasion resistance. Its easy to clean, smooth, gloss finish makes the product ideal for environments such as electronics manufacturing, solvent and powder filling and handling, pharmaceutical industry, laboratories, operating theatres etc.

Due consideration should also be given to the choice of footwear and truck wheels to ensure that moving persons and vehicles are not insulated from the floor surface.



FeRFA Classification

BS 8204-6 Type 5

Colours*

Flowepoxy ESD is available in Charcoal, Chelsea Blue, Dark Grey, Green, Mid Grey, Midnight Blue and Red only.

* Flowepoxy ESD is not 100% colour fast and may yellow over time. The rate of change will depend on UV light and heat levels and cannot be predicted. This will be more pronounced with lighter colours and blue shades and does not compromise the product's performance or chemical resistance characteristics.

Appearance

Seamless, smooth, gloss finish. Nominal 3 mm thick. In order to retain the high gloss, regular polishing with a metallised conductive polish will be required. Otherwise the product may scratch due to abrasive particles and dust with use. This is not detrimental to the product's performance.

Advantages

- ✓ Flow-applied rapid installation
- ✓ Seamless and non-dusting, easy to clean
- ✓ High wear and abrasion resistance
- ✓ Electrically Conductive

Suitable Substrates

Concrete and polymer-modified cementitious screeds

Uses

- ✓ Food and beverage
- ✓ Retail and car showrooms
- ✓ Chemical industries
- ✓ Schools
- ✓ Hospitals
- ✓ Hotels

Pack Size

30 kg unit.

Components

Flowepoxy comprises of:

1 x Resin
1 x Hardener
1 x Aggregate

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Technical Data

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Thickness

Applied at 2-3 mm thickness.

Chemical Resistance

Good Chemical Resistance, please consult us on specific materials.

Typical Properties, 28 days at 20 ºC

BS 8204-6	Type 5
Adhesion to concrete (BS EN 1504-2) (concrete failure)	>1.5 MPa
Electrical Resistance to Ground (500 V):	
BS EN 1081 (R_2)	< 10^8 Ω
BS EN 61340-5-1	< 10^9 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.

Cure Schedule at 20 ºC

Working life of full packs*	25 minutes
Finished floor**	
Light foot traffic	24 hours
Heavy Duty Traffic	48 hours
Full Cure	7 days

The material should be protected from water for 7 days.

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

** The above cure times are approximate and given as a guide only. These times can vary due to prevailing site conditions. Higher temperatures will shorten working time and lower temperatures will extend cure times.

Pack Size

30 kg.

Coverage*

5.5 kg/m^2 minimum

* Coverage figures given are theoretical. Practical coverage rates may vary due to wastage factors and the type, condition, profile and porosity of the substrate.

Priming

Flowepoxy requires 2 coats of Flowprime SF prior application.

Application Conditions

Ideal ambient and substrate temperature range is 15-25ºC. Localised heating (electric powered warm air blower) 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. In flow applied systems there is a tendency for the finish to mirror imperfections in the substrate.

Grinding, or light vacuum-contained shot-blasting is therefore preferred over planing for these systems. Percussive scabbling or acid etching is not recommended. The substrate should be finished to a surface regularity when tested according to BS 8204-1 of class SR1.

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.

Mixing

IMPORTANT: Prior to mixing, the temperature of the three components must be between 15 and 25 ºC. Otherwise coverage rate, flow and appearance will be impaired.

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 approximately 30 seconds until homogeneous. Decant the mixture into a suitable mixing vessel and gradually add the aggregate component whilst continuing the mixing action. When all the aggregate has been added, mix for a minimum of 3 minutes until a uniform coloured, lump-free mix is obtained. Care should be taken to ensure that any material adhering to the sides, bottom and corners of the mixer is thoroughly blended in. Unduly extended or vigorous mixing should be avoided in order to minimize air entrainment.

Each mix should be mixed in exactly the same way for the same length of time to minimise the risk of shading. Apply the mixture immediately onto pre-primed areas, level to the required thickness using a steel float then de-aerate thoroughly using a spiked roller. **Do not use a notched trowel.**

Application

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. 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 edges 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 de-bonding of the surface topping.

Technical Data

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Application of Flowepoxy ESD:
Install copper tape 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, re-prime using Flowprime ESD (see separate datasheet).

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.

Cleaning:
Regular cleaning is essential to enhance and maintain the life expectancy, slip resistance and appearance of the floor. Flowepoxy can be easily cleaned using industry standard cleaning chemicals and techniques. Consult your cleaning chemical and equipment supplier for more information.

Health and Safety

Before using this product, please ensure that you have received and read the product Safety Data Sheet.

EU Directive 2004/42/EC

Complies with category j type SB (< 500 g/l VOC content).

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

12 months if stored in accordance with the above recommendations.

Limitations

Do not proceed with application if atmospheric relative humidity is, or is anticipated to be, >80% 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 Manufacture of **Flowepoxy** is a batch process and despite close manufacturing tolerances, minor variations in shade 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.

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 part. Care should also be given to the choice of footwear, furniture, tools and fork lift trucks for example.

Availability

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

Technical Advice

For further information please contact our office.

You Might Also Need:

- Self-leveller Kit
- Mixing Drill Attachment
- Flowprime SF
- Copper Tape

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

Virtus Resins, The Shippon, Pentre-Celyn, Ruthin LL15 2SP, England		
CE	13	DOP RV00367
EN 13813 SR-B2,0-AR0,5-IR14 Synthetic resin screed material for use internally subject to reaction to fire regulations		

Reaction to fire	E_{fl} (1)	Impact resistance	IR14
Release of corrosive substances	SR	Sound insulation	NPD
		Sound absorption	NPD
Water permeability	NPD	Thermal resistance	NPD
Wear resistance	AR0,5	Chemical resistance	NPD
Bond strength	B2,0	Electrical resistance	ER105

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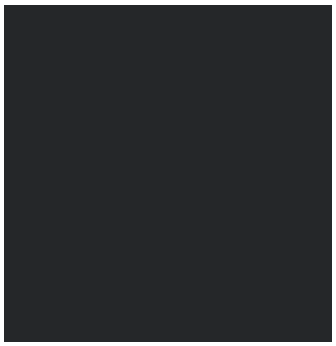
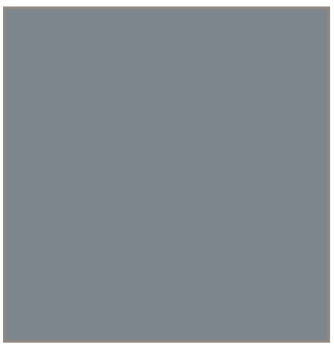
Flow-applied self-smoothing epoxy floor coating

Flowepoxy ESD Colour Chart

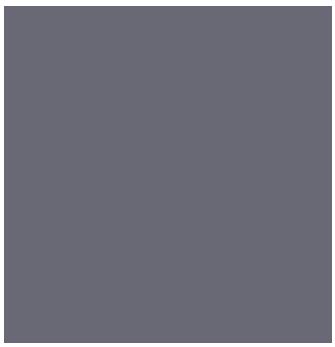
Charcoal



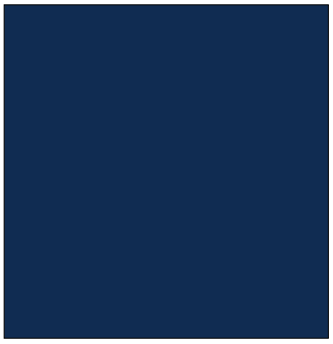
Mid Grey



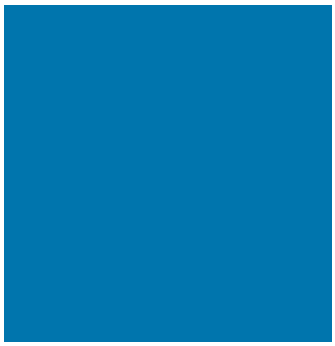
Dark Grey



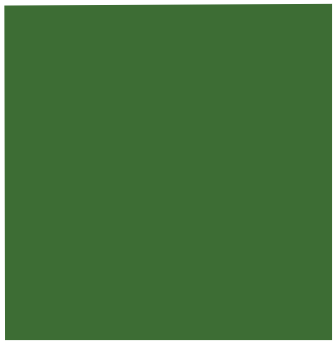
Midnight Blue*



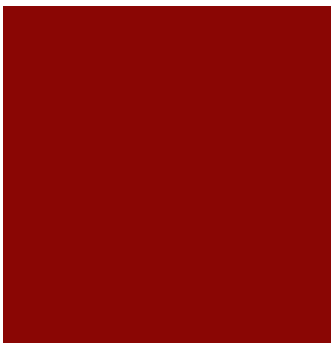
Chelsea Blue



Green



Red



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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