

Screed EP

Medium Duty Epoxy Floor Screed

Description

Screed EP is a three-component coloured epoxy resin mortar for application to industrial floors which are subject to heavy traffic and light chemical attack. **Screed EP** is trowel applied at 4 - 6 mm or above and can therefore be used to repair badly damaged concrete floors.

Screed EP is ideal for floors where a high level of abrasion resistance is required such as:

- production and packaging areas
- Industrial manufacturing and storage areas
- engineering workshops
- warehouses
- aerospace and automotive industries

Screed EP should not be used where steam cleaning is employed or in areas of high chemical spillage. Please refer to technical datasheets for **Flowdur HF** and **Flowdur RT** for heavy duty, highly chemically resistant flooring.

Appearance

Lightly textured coloured finish with a speckled appearance (unsealed).

Substrates

Concrete and polymer modified sand/cement screeds.

Thickness

Typically 4 - 6 mm. Thicknesses greater than 6 mm should be in-filled with **Screed EP** and made up using a subsequent 6 mm application.

Typical Properties, 28 days at 20 °C

BS 8204-6	Type 6
Adhesion to concrete (BS EN 1504-2) (concrete failure)	> 1.5 MPa
Temperature resistance	Up to 50°C

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 °C

Working life of full packs * 25 minutes

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

Finished floor *

Overcoat time for seal coats	12 hours
Foot traffic	24 hours
Heavy traffic	72 hours
Full cure	7 days

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

Pack Size

27.28 kg

Coverage*

Approximately 2 kg/m² is required per 1 mm thickness. For example, at 4 mm thickness 8 kg/m² is required plus wastage.

Typical Requirements:

1. **Flowprime TC @ 200-300 g/m²**
2. **Screed EP @ 2 kg/m² per 1 mm thickness**
3. **Flowgrout SF @ 250 g/m²**
4. **Top coat - see individual data sheets**

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

Colours

Screed EP is available in a range of standard colours. **Screed EP** 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. This will be more pronounced with lighter colours and blue shades and does not compromise the product's performance or chemical resistance characteristics.

Application Conditions

Ideal ambient and substrate temperature range is 15 - 25 °C. 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 °C 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. The surface strength of the concrete base or screed assessed using a rebound hammer in accordance with BS 1881-202 should be above 25 and the surface tensile strength should exceed 1.5 N/mm².

Virtus Resins

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An effective structural damp proof membrane should be present and the relative humidity at the surface no more than 75% when measured by the method of BS 8203. New concrete should be a minimum of Grade C35 with a minimum cement content of 300 kg/m³ and should not contain a water repellent admixture.

Surface Preparation

Inadequate preparation will lead to loss of adhesion and failure. Substrates should be clean, dry, sound and free of surface laitance. See the **Virtus Guide to Surface Preparation** for further information.

Application Instructions

Priming

Screed EP should be applied into tacky **Flowprime TC** (typically 45 - 60 minutes after application). If, prior to application of **Screed EP**, there are dry patches, a further primer coat is required. If the primer has been left to cure for >48 hours then the primer surface should be mechanically abraded and the area re-primed. If the substrate relative humidity exceeds 75%, **Flowprime DPM** should be used and allowed to cure prior to the use of **Flowprime TC**. See separate data sheet.

Application of Screed EP

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 (200 - 500 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. Spread the mixture to the required thickness, compact and trowel smooth using a steel float. Avoid excessive tooling which may lead to 'trowel burn' or resin rich spots.

Sealing

Screed EP requires sealing, especially when used in wet environments. Apply **Flowgrout** to the cured **Screed** mortar to fully grout and seal the surface. When cured, over-coat with the appropriate finish coat. A choice of sealcoats from the Virtus range can be applied as the final finish.

Cleaning

Regular cleaning is essential to enhance and maintain the life expectancy and appearance of the product. **Screed EP** can be easily cleaned using industry standard cleaning chemicals and techniques, especially where sealed. Consult your cleaning chemical and equipment supplier for more information.

Health and Safety

Refer to product Safety Data Sheet before use.

EU Directive 2004/42/EC

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

Storage

Materials should be kept dry and stored in a weatherproof building maintained at 15 °C to 20 °C on pallets and away from walls. Consignments should be used in order of batch number. 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 °C above the dew point. Application should not commence when the substrate temperature or the ambient temperature is, or is anticipated to be <5 °C 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 **Screed EP** 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.

Technical Advice

For further information on this or any other Virtus Resins 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

Virtus Resins, The Shippon, Pentre-Celyn, Ruthin LL15 2SP			
CE		13	DOP RV0028
EN 13813 SR-B2,0 Synthetic resin screed material for use internally in buildings not subject to reaction to fire regulations			
Reaction to fire	NPD	Impact resistance	NPD
Release of corrosive substances	SR	Sound insulation	NPD
Water permeability	NPD	Sound absorption	NPD
Wear resistance	NPD	Thermal resistance	NPD
Bond strength	B2,0	Chemical resistance	NPD

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