

FLOWSHIELD HD

A four pack, easy to apply, epoxy resin self smoothing flooring system laid at 4 - 6 mm in a range of colours.

Uses

To provide an easy to clean, chemical resistant and hard wearing floor finish. Typical areas for use are dry process manufacturing, packaging and warehousing subjected to intensive wheeled & fork lift traffic. Suitable for AGV, Hovair and other robotic equipment trafficking.

Benefits

- ✓ Seamless & hygienic finish, no crevices where dirt and bacteria can dwell.
- ✓ Excellent chemical resistance to sugars & acids.
- ✓ Easy to clean & sterilise, low maintenance requirement.
- ✓ Attractive, light reflectant appearance.
- ✓ High abrasion resistance.
- ✓ Solvent free; low odour.
- ✓ Fast installation.

Coverage

At 4 mm, 7.6 kg/m² (0.13 m²/kg)
At 6 mm, 11.4 kg/m² (0.09 m²/kg)

Colours

Available in a range of standard colours. Most British Standard and RAL colours can be provided to special order.

Batch to batch colour variation may occur. Ensure that materials for final application are always drawn from the same batch.

Where colour matching is required over more than one order or delivery, Flowcrete Technical department must be contacted prior to placing the order(s) and the requirement stated clearly on all orders relating to the project(s).

Standard Range:-

Beige	06C33
Tile Red	04D44
Forest Green	14E53
Pastel Green	14C35
Clipper Blue	20E51
Goosewing Grey	00A05
Dark Grey	00A13
Mid Grey	18B21

Nearest BS4800 reference is given as a guide only.

SPECIFICATION

Surface Preparation

Totally enclosed shot blasting or scarification. All residues must be removed to provide a dry, dust free open textured surface.

Priming

Use Flowprime, porous substrates may require 2 coats.

Mixing

Do not mix by hand. Pack components are pre-weighed for optimum performance. Never split or proportion packs.

Mix Flowshield Base A to re-disperse any settlement. Transfer to mixing vessel and add Flowshield Hardener B and mix until uniform using a slow speed drill and helical spinner head for 2 minutes.

Transfer to a larger container and mix in the Flowshield Filler C and Flowshield HD Filler D with a drill and helical spinner, or in a pan type mixer, until uniform. Take care not to entrain air.

Application

Immediately after mixing, spread Flowshield HD using a steel trowel to the required thickness.

Finishing

Immediately after spreading, Flowshield HD should be rolled with a spiked roller to release any entrapped air.

It should be lightly rolled again 25 - 45 minutes later (the time depending on the temperature - see Ambient Conditions section overleaf).

Abrasion Resistant Dressings

Apply approximately 1 hour after Flowshield HD application (subject to ambient conditions). Grain size to suit clients needs. Most common dressings are 70s mesh Alox (white) or silicon carbide (black), at 0.1 - 0.25 kg/m².

Physical Properties

	10 ^o C	20 ^o C
Pot Life	60 min	40 mins
Light Traffic	24 hrs	16 hrs
Tack free time	16 hrs	8 hrs
Full traffic	72 hrs	48 hrs
Fully cured	10 days	7 days

<i>Compressive strength</i>	> 90 N/mm ²
<i>Flexural strength</i>	> 33 N/mm ²
<i>Tensile strength</i>	> 15 N/mm ²

<i>Bond strength</i>	> cohesive strength of concrete
<i>Water adsorption</i>	0% (Karsten test method)
<i>Abrasion resistance</i>	< 0.05mm (C&CA Abrasion as BS 8204)
<i>Impact resistance</i>	< 0.5 mm (BRE screed tester)

General Specification

Flowshield HD epoxy resin self levelling floor system to be supplied by **Flowcrete Specialist Flooring**, Sandbach, Cheshire.

Installation by an applicator trained and approved by Flowcrete Group plc.



Ambient Conditions

High humidity during cure can give a matt, whitened surface or be susceptible to water spotting. This is only a surface effect and will not alter the durability or chemical resistance.

Flowshield should not be applied at material or floor temperatures below 10°C. Temperatures should not fall below 5°C in the 24hrs after application.

NB.

Concrete slabs exposed to low temperatures act as a heat sink. Heating with hot air gas blowers for 24 hours can take the air temperature from 4°C to 20°C but the concrete slab may only be raised up to 6°C.

SUBSTRATE REQUIREMENTS

- Must be of sufficient strength to support loads applied through the topping
- Must be free from rising damp
- All contamination must be removed to give a clean dry textured surface

Repairs & levels

All damaged areas of floor should be made good and up to level with Flowtex F1 Mortar applied over wet Flowprime.

To level slight undulations in the floor, a scratch coat of Flowshield HD can be applied followed by a 50's mesh sand scatter and allowed to cure prior to application of Flowshield HD.

Concrete floors are generally laid to a levels tolerance of +/- 3 mm under a 3 metre straight edge. Whilst Flowshield HD has excellent local levelling properties, overall level deviations will not necessarily be eliminated by laying a self smoothing topping of 4-6 mm.

To rectify levels use Epoxy Scratch Coat prior to Flowshield HD application

CHEMICAL RESISTANCE

Excellent resistance to sugars and most acids (organic & inorganic). Consult Flowcrete for more detailed test data.

Performance against more common chemicals :-

	Excellent	Good	Limited
Hydrochloric acid 10%	✓		
Sulphuric acid 25%	✓		
Citric Acid 10%	✓		
Acetic Acid 5%		✓	
Lactic Acid 10%		✓	
Acetone			✓
Methanol			✓
Sugar Syrups	✓		
Caustic Soda	✓		
Petrol		✓	
Oil	✓		
Detergents		✓	

Substrate Treatments

If moisture content is above 75% RH as per BS8203, use Hydraseal DPM surface damp proof membrane.

Substrate Movement

All moving joints must be carried through the Flowshield HD and properly sealed. Construction joints and cracks may be covered but if substrate movement occurs, the Flowshield HD will reflect the crack.

Packaging

38 kgs packs, consisting of Flowshield Base A, Hardener B and Filler C with Flowshield HD Filler D.

Storage & Shelf Life

Stored unopened in dry conditions at 10 - 25 °C, shelf life will be 12 months minimum.

Tool Cleaning

Clean with Flowsolve Cleaner before the product has cured.

Health & Safety

Some of the components of this product may be hazardous during mixing and application, please consult the relevant Health & Safety Data Sheets, available from Flowcrete on request and sent with each delivery.

Further Information

Flowcrete has a wealth of technical & practical experience built up over many years in our pursuit of excellence in flooring and concrete technology. Clients are welcome to call our Technical Desk or visit our Technology Centre in Sandbach.

Important Note

Flowcrete's products are guaranteed against defective materials and manufacture & are sold subject to its standard Terms & Conditions of Sale, copies of which may be obtained on request. Whilst Flowcrete endeavours to ensure that any advice, recommendation, specification or information is accurate and correct, it cannot - because it has no direct or continuous control over where or how its products are applied - accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation or information given by it.