FLH 1

Fast Resurfacing and Levelling Hardner

Features

Suitable for internal and external applications

For smoothing and resurfacing paths, drives, parking areas, courtyards, etc.

Cost effective solution for smoothing rough or impact damaged concrete

Fast setting-walkable after 2 - 3 hours

Rapid hardening-can withstand light vehicular traffic after 48 hours

Easy to mix and apply - pumpable

For thicknesses from 2 - 20 mm in a single application.

Ideal for levelling floors prior to the application of MKP CHEMICALS

DPM can be used with suitable resin coatings

DESCRIPTION

FLH 1 is a fast setting cement-based product designed to smooth and level rough and damaged concrete surface in external and internal situations.FLH 1 is a grey powder consisting of special cements, graded aggregates and high quality synthetic resins. When mixed with water, a fluid mortar is produced which sets within 2 hours and can normally be walked on after approximately 2 - 3 hours at 27±1°C .FLH 1 can be applied from 2mm to 20mm in thickness. the set and hardened FLH 1 is usually ready to receive light wheeled traffic after 48 hours at 27±1°C.

USE

FLH1 will smooth and level concrete surfaces such as balconies, patios, domestic driveways, garages, walkways and other concrete surface exposed to normal foot and rubber wheeled traffic. FLH 1 can also be used for filling holes and resurfacing damaged floors, such as concrete or cement/sand screeds, as well as pre-smoothing concrete floors prior to the application of suitable damp proof membranes, such as MKP CHEMICALS Surface Damp Proof Membrane.

NOTE:FLH 1 is not recommended for heavy duty industrial floors, public highways or traffic with solid or metal wheels. FLH 1 is suitable for permanently wet areas and may be used in swimming pools with the addition of a suitable waterproof layer on top of it. FLH 1 is not recommended for areas of intensive abrasive use in wet areas. Do not apply FLH 1 over asphalt or tarmacadam surface. The hardened FLH 1 should be protected from spillages and materials that damage concrete surfaces. If required, dried FLH 1 can be painted

SURFACE PREPARATION

All concrete surface should be mature i.e., at least 6 weeks old. The concrete surface must be hard, sound, thoroughly clean, free of all oil, grease, curing compounds and other barrier materials. The substrate can be dry or moist. FLH 1 may be unsuitable for aged or frost damaged concrete subject to regular deflection from thermal cycling or mechanical loading.

Use a suitable degreaser to remove oil, grease or similar contaminants and rinse well prior to mechanical preparation. All surfaces must be prepared as necessary to ensure good adhesion. The prepared surface must have the appearance of clean sound concrete with some exposed aggregate in the surface. There must be no traces of any dirt, previous treatments or surface contamination. Sufficient and through mechanical preparation by planing, scabbling or shot blasting the surface is essential for commercial areas, especially those intended for exposure to regular or intensive wheeled traffic, or heavy loading. Vacuum clean the prepared surface to remove all dust and debris, and ideally wash the surface using high pressure water jet equipment. All cracks in new and old concrete should be prepared to inhibit cracking in the FLH 1.

Any structural or live joints or cracks in the substrate must be carried through the FLH 1 to the surfaces. Internal concrete and absorbent surfaces, should be primed with MKP MPR 1 PRIMER DILUTED 1:7 with clean water, applied with a brush or broom. Any puddles or surface water should be removed with a broom so that excess water is not incorporated in the mortar during application.

In all areas subjected to regular wheeled traffic or heavy loading, and on dense surface, MKP MPR 1 Solvent Free Epoxy Primer should be used to prime, sand blinding the surface while still wet. This should be allowed to cure and excess sand removed before applying FLH 1.

PRIMING

Very dense impervious surfaces should be primed with MKP MPR 1 Solvent Free Epoxy Primer sand blinded with Fine Aggregate.

MIXING

In a clean mixing container add the powder to the required amount of clean water whilst stirring thoroughly until a lump free mortar is produced. The mixing proportions by volume are approximately:- 5 parts FLH 1 powder to 1 part clean water A 25kg bag requires 5 - 5.25 litres of water.

If gradient levelling has to be carried out, the water content must be reduced.

To pump the mortar, use continuous pumps with a capacity of 20 - 40 litres of mortar per minute.

Do not use excess water as this will reduce the strength of the set and hardened mortar.

The use of mixing paddle with a 10 mm chuck slow speed (600 - 1000 r.p.m.) electric drill makes light work of mixing.

FLH 1 mortar should be applied within 30 minutes at 27±1°C. This time is extended at lower and reduced at higher temperatures.

APPLICATION

Pour the mixed FLH 1 onto the prepared and primed substrate. The mixed mortar will flow out and self-smoothduring the first 10 minutes of its 30 minutes working time. Spread the mortar using a steel trowel. or Float. For larger areas use a suitable gauging tool with thickness height adjustment to spread the mortar. A suitable long handled smoothing trowel can be used to simplify the finishing operation.

The applied FLH 1 surface can be left with a trowel finish. Alternatively, to create a more non-slip finish, the water content should be reduced and then 'broom finished' once the initial set has occurred (approximately 40 minutes under normal conditions). If a second layer of FLH 1 is required, this should be applied after the first layer has hardened fully. The first layer should be machine sanded (paper 16 to 36), cleaned and primed with MKP CHEMICALS diluted 1:1 with water for dry indoor use and diluted 1:7 with water for external use or damp interior areas.

NOTE: Thickness of combined layers should not exceed 20 mm. Once freshly applied FLH1 should be protected from adverse climatic conditions e.g. rapid drying, rain, frost etc., until hardened. Apply at temperatures above 5°C.

THICKNESS

FLH 1 can be applied neat from 2 mm to 20 mm thick.

CLEANING

FLH 1 can be removed from tools and equipment by washing in clean water immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES

The values shown are typical of results obtained in the laboratory at 27± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

FLH1	**@ 27± 1ºC**
Bulk density of powder	approx. 1.37kg/litre
Weight of fresh mortar	approx. 1.94kg/litre
Initial set (Vicat)	approx. 40 minutes
Final set (Vicat)	approx. 2 hours

Compressive Strength

After 1 day	13.0 N/mm^2
After 7 days	22.0 N/mm^2
After 28 days	26.0 N/mm^2

Flexural Strength

After 1 day	3.0 N/mm^2
After 7 days	5.0 N/mm^2
After 28 days	6.0 N/mm^2

Ball Impact Hardness

After 1 day	6.5 mm

Scratch Hardness

After 1 day	1.0 mm

Overcoat time for industrial coatings

Thickness of FLH1	Time
Up to 5mm	2 days
Up to 10 mm	5 days
Up to 20 mm	7 days

COVERAGE ESTIMATES

products; however as we have no control over site conditions or the execution of the work, we accept no Pack size Coverage

25kg	Approximately 3 m² @ 5 mm thickness

NOTE: These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE

FLH 1 must be stored in unopened packaging, clear of the ground in cool dry conditions and be protected from excessive draught. If stored correctly, as detailed above, the shelf life of this product is 12 months from the date shown on the packaging. The activity of the reducing agent (added to control the level of soluble Chromium VI) will be maintained and this product will contain, when mixed with water, no more than 0.0002% (2 ppm) soluble Chromium VI of the total dry weight of the cement content of this product. FLH 1 must not be used after the end of the declared storage period.

PRECAUTIONS

FLH 1 contains more than 20% Portland cement and, therefore, in line with current legislation, is classified as irritating to eyes and skin. For this reason the following precautions should be observed:- Avoid contact with skin and eyes; in case of contact with eyes, rinse immediately with plenty of water and seek medical advice; wear suitable gloves and keep the product out of the reach of children. Avoid generation of airborne dust during mixing.

DISPOSAL/SPILLAGE

Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

For further information please refer to the Product Safety Data Sheet.

CONDITIONS OF SALE

Sold subject to the Company's conditions of sale which are available on request.

NOTE: The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our liability for any loss or damage which may arise as a result thereof.