

MPR 1

Solvent Free Epoxy Primer

TWO PART SOLVENT FREE EPOXY PRIMER FOR USE WITH MKP COATING POLYURETHANE SCREEDS AND SELF-SMOOTHING EPOXY FLOOR COATINGS DESCRIPTION

MPR 1 is a two part solvent free epoxy primer for use with MKP CHEMICALS polyurethane screeds and self-smoothing epoxy floor coatings. Blind with Fine Aggregate and use as a primer prior to applying thick applications of the MKP CHEMICALS MPR 1 Industrial Floor System, or other appropriate MKP CHEMICALS cement-based products.

Where surfaces are very porous, more than one coat of primer may be required to achieve the desired bonding efficiency.

For applications on new concrete or where the relative humidity (RH) of the substrate is in excess of 75%, MKP CHEMICALS Surface Damp Proof Membrane should be used. If the substrate is particularly smooth, the surface of the MPR 1 should be seeded with Fine Aggregate immediately after application to give a mechanical key to facilitate installation of resin screeds and toppings.

SURFACE PREPARATION

Thorough and appropriate surface preparation is essential for the long-term performance of the floor and is the foundation of any good flooring installation. The choice of technique to be used will be determined by the site conditions and sometimes will necessitate a combination of methods to ensure that a satisfactory substrate is achieved.

Suitable methods include contained shot blasting and surface planing or scabbling.

Very oily or grease contaminated floors need particular care and treatment such as hot compressed air which should be used in combination with degreasing and mechanical preparation.

Diamond grinders, along with scabbling machines, can also be used to remove high spots from the surface; some scabbling machines can remove up to 6mm of concrete in one pass and can therefore help to control levels.

Whichever technique is used, the edges of the floor and any other areas where the large surface preparation machines cannot reach must also be prepared, typically by edge grinding. NOTE: Percussive scabbling is not normally recommended.

A visual examination of the concrete surface is essential but will only give an overview of surface condition and damage sustained. The physical condition of the concrete also needs to be assessed for strength, including pull-off strength, moisture content and presence of an effective damp proof membrane.

Surface strength should be tested after preparation, in accordance with BS 8204-6:2001, which recommends a 2 rebound hammer strength of 25 N/mm² or a minimum surface tensile strength of 1.5 N/mm².

The long-term performance of any system bonded to a substrate depends on the adhesion achieved, which itself depends upon the substrate having sufficient cohesive strength and being thoroughly prepared. New direct finished base slabs or fine concrete

screeds should be designed in accordance with BS 8204-1: 1999, laid to falls as necessary and not contain a water repellent admixture.

Minor repairs to cracks or holes should be carried out using an appropriate product. Any joints or cracks subject to movement must be brought through to the final floor finish and a suitable movement joint profile and nosing joint detail used to avoid reflective cracking. Any resin based repairs which will be covered by MKP CHEMICALS Products must be hard, sound and blinded with an appropriate aggregate.

Once a new industrial floor has been installed it should be protected from other trades and contamination until the recommended curing period has elapsed.

SUBSTRATE PREPARATION

The concrete or screed substrate must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use a suitable Degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying MPR 1. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.

NOTE: Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface and suitably sealed. New concrete slabs must be allowed to cure for at least 14 days.

MIXING

The individual contents of the MPR 1 should be thoroughly stirred before being mixed together. The entire contents of the Part B should be poured into the Part A container and the two materials mixed thoroughly for at least 3 minutes using a heavy duty slow speed drill with a spiral paddle. Some of the mixed components should be reintroduced back into the hardener container in order to activate any residue and then poured back into the larger mixing vessel and re-mixed for 30 seconds. Mixing in this way will ensure product consistency and that any resin that remains in the containers after application will cure to provide for easier waste disposal.

APPLICATION

Once mixed, the material should be spread over the floor as self-heating in the container will reduce working time. Apply using a brush or short / medium pile roller. One or more coats may be needed to ensure that a uniform coating is achieved and to compensate for differences in surface porosity.

All movement joints in the sub-floor must be carried through the topping and properly sealed. Construction joints and cracks not subject to movement may be overlaid but should the floor move in anyway, these defects will reflect through the system. Isolation joints will need to be allowed for in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

CLEANING

MPR 1 can be removed from tools and equipment by using MKP CHEMICALS 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 $27 \pm 1^\circ\text{C}$. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

MPR 1	@ $27 \pm 1^\circ\text{C}$
Working time	20 mins
Walkability	Approximately 8 hours

MPR 1 should be allowed to cure prior to the installation of the final floor finish, typically 24 hours at $27 \pm 1^\circ\text{C}$.

COVERAGE ESTIMATES

Pack size	Coverage
7.5kg	Approximately
Part A 5kg Part B 2.5 kg	20-25 m ² per coat

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

MPR 1 has a shelf life of 12 months if kept in a dry, store between 5°C and 30°C in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

MAINTENANCE OF RESIN FLOORINGS

The floor finish provides an aesthetic finish, a wearing surface and protects the substrate concrete from CHEMICALS. To ensure that the appearance of the flooring is kept at its best, performs as it should and stays in the required hygienic condition, it is important to follow good housekeeping and identify an appropriate regular cleaning regime.

Generally a mechanical scrubber fitted with appropriate brushes and clean water rinsing, incorporating wet vacuum, will be most effective (using up to a maximum water temperature of 50°C for epoxy systems). The use of the traditional mop and bucket technique is not appropriate.

Heavily trafficked areas need to be cleaned more frequently. Only use cleaning liquids, such as neutral or low alkali detergents, which are recommended for use with resin flooring and ensure that the correct dilution is used. Beware of cleaning liquids/polishes that may leave an oily or otherwise slippery residue.

Note: Phosphoric acid based cleaners can damage epoxy resin based materials and hypochlorite based materials can cause bleaching. Undiluted cleaning CHEMICALS can be very aggressive and can stain and even damage some resin flooring.

In food preparation areas and other high hygiene areas, pressure washing with a bactericide at 60°C to 80°C or steam cleaning should be used (for floors suitable for steam cleaning, a 9 mm thickness of MSC 4 s Heavy Duty Polyurethane Screed should be specified).

Any spillages of CHEMICALS, particularly corrosive CHEMICALS, should be cleaned off the surface as soon as possible to minimise the risk of damage or discolouration to the floor. Drip trays should be used if necessary. If spillages are allowed to dry, this results in higher concentrations of the materials which may lead to discolouration or even early failure; dried deposits of mineral based cleaners can be extremely difficult to remove.

Any mechanical damage to the floor surface should be repaired as soon as possible to minimise the risk of damage spreading and the possibility of liquids penetrating along the bond line. Thin coatings may need to be overcoated periodically to maintain performance, particularly in high traffic areas.

PRECAUTIONS

The hardener which contains 4,4' -isopropylidenediphenol and amines classified as corrosive and the epoxy resin which contains bisphenol A/F-epichlorhydrin, can be irritating to the eyes and skin, and may cause sensitisation by contact. They are considered harmful in contact with the skin and if swallowed. During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves or by using (if necessary) a suitable barrier cream.

In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

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 products; however as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

