General Application Advice

Reactive Resins

Application Guidelines

Packaging
Two-component MC-DUR coating materials are delivered in packs with coordinated quantities (Component A: base component, Component B: hardener component).

Mixing
Before application the base and hardener must be mixed together thoroughly, using slowly rotating mechanical mixers (approx. 300-400 rev/minute) with, for example, anchor shaped mixers or paint mixers. In the case of pigmented resins, the base-component should be stirred separately beforehand for about 1 minute. Make sure that the materials in the corners and sides of the mixing container are thoroughly mixed as well. The mixing is only complete when a homogenous mixture has been achieved. After mixing the material should be filled into a clean container and briefly mixed again ("re-potting"). Splitting containers and to mix partial quantities must be avoided. The material must be applied within the stated application time or pot life.

One-component coating materials must be mixed thoroughly before use. In opened packs the material forms a thin film which must be removed before mixing. We advise to use only complete packs.

Priming/Bonding Agent
After the substrate preparation (see information sheet) the concrete- or screed-substrate is primed to ensure a strong and good bonding between substrate and coating or reactive resin mortar. For this low-viscosity, transparent epoxy resins, e. g. MC-DUR 1200 VK, MC-DUR 1390 VK and MC-DUR 1101 are used. These are applied with rubber squeegees and/or lamb-skin rollers. To complete application make sure to work the material cross-wise into the substrate with a lamb-skin roller. If it is not possible to overcoat the primer within 24 hours it must be strewn with oven-dried quartz-sand (0.1-0.3 mm) while still fresh (coverage: approx. 1-2 kg/m^2). Loose sand must be removed after curing. Reactive resin mortars with a mixing ratio of 1 : 4 p.b.w. (resin : aggregate) or more are applied onto a fresh bonding coat. The exact coverage for primers or bonding coats depends on the roughness, absorbance and temperature of the substrate and should be determined by laying a trial-area.

Scratch Coat/Filler Coat
In most cases priming is not sufficient to fill-in all pores and blow holes in the substrate. It is therefore necessary to apply a scratch coat onto the primed surface to avoid bubble-formation, craters and levelling-problems. The primer resin is filled-up with oven-dried quartz-sand (0.1-0.3 mm) with a mixing ratio of 1 : 1 p.b.w. The scratch coat is applied with steel floats, rubber squeegees or hard-rubber floats. The filler is worked into the substrate pores by sharply scratching it over the grain-tips. If working on vertical areas a maximum of 4 weight-% MC-Stellmittel TX 19 is added to the mixture. If the scratch coat cannot be overcoated within 24 hours, it should be strewn with oven-dried quartz-sand (0.1-0.3 mm) while still fresh (coverage: approx. 1-2 kg/m^2). Loose sand is removed after curing. Underneath polyurethane-resin coatings the fresh coat must always be strewn to achieve an optimal bond. However, for conductive systems the scratch coat must not be strewn. In these cases the conductive layer must be applied within 24 hours. A scratch coat does usually not build up much of a layer-thickness. More pronounced unevenness or voids should therefore be filled in with a reactive resin mortar. Please refer to our leaflet "Levelling".

Self Leveller and High Build Coatings
The wearing layer is chosen according to the requirements. The material is poured onto the primer or scratch coat and spread with a steel float, pinfloat or rubber squeegee. If a layer-thickness of more than 1 mm is required, the reactive resins may be filled with oven-dried quartz-sand (0.1-0.3 mm) in a mixing ratio of 1 : 0.5 p.b.w. (please refer to the respective information leaflet). Afterwards the fresh areas are de-aerated cross-wise with a spiked roller. To achieve an anti-skid surface, the quartz-sand filled coating is strewn in excess with oven-dried quartz-sand (e.g. 0.2-0.7 mm or larger) while still fresh. After curing the excess sand is removed and a top-sealer may be applied. The top sealer is applied sharply across the grains using a rubber squeegee and rolled crosswise with a short-piled lambskin roller. Depending on the material system a second sealer coat might be necessary. Fibre-containing materials must not be applied with a roller. We advise the use of hard-rubber floats in these cases. In public areas like, for example, department store floors, offices and

MC-Bauchemie • Am Kruppwald 1-8 • 46238 Bottrop • Tel. +49 (0) 2041-101 10 • Fax: +49 (0) 2041-101 188
info@mc-bauchemie.de • www.mc-bauchemie.de

exhibition spaces, it is possible to uniformly blow coloured flakes into the surface to improve the anti-skid properties. These or smooth finishes may be matted with a transparent matt sealer.

For application on sloped or vertical areas you can either use the thixotropic versions of the materials or thicken the material with MC-Stellmittel TX 19 (MC-Thixotropic Agent X 19). Please ask for our technical advice when planning to coat conductive surfaces in vertical areas.

Sealer
On surfaces with low mechanical loading, a sealer may be applied onto the primer or scratch coat. A sealer has a lower layer-thickness (usually < 0.5 mm) and is applied cross-wise with a roller. Depending on the material it might be necessary to apply two sealer layers.
To achieve a matt surface, an additional matt sealer can be applied. Short-piled lamb-skin rollers are suitable for this. For application on sloped or vertical areas you can either use the thixotropic versions of the materials or thicken the material with MC-Stellmittel TX 19 (MC-Thixotropic Agent TX 19).

Spray Application
Many reactive resins can be applied by airless-spraying (see technical data sheet). Please ask for our technical advice.

Equipment cleaning: The equipment must be cleaned immediately with solvents each time, if application is discontinued (see technical data sheet).

General Information
When working with reactive resins the rooms must be well-ventilated during application and curing. Otherwise the result may be an extended curing phase and surface imperfection. Coverage, application time, resistance to foot traffic and time until full resistance depend on the temperature and the project. Chemical attacks and exposure to light might cause changes in the colour, which usually do not affect the properties and usability. Chemically and mechanically loaded areas are subject to wear and tear. Scratching of the surface may be the result of mechanical use and wearing. Regular check-ups and continuous maintenance are advised.

High temperatures shorten and low temperatures extend all indicated times and intervals. A change in temperature of 10 K reduces or doubles all given times as a thumb rule. Colour variations between pigmented materials from different batches may occur. Joining areas should therefore always be coated with products from the same batch. Therefore, when re-ordering materials, always state the batch-number of the base-component.

Safety Advice
Please take notice of the safety information and advice given on the packaging labels and safety information leafets. Further information on safety and safety measures can be found in our leaflet “Safety Measures for Handling Coatings Materials and Reactive Resins”.

Edition 06/10. Some technical changes have been made to this print medium. Older editions are invalid and may not be used anymore. If a technically revised new edition is issued, this edition becomes invalid.

MC-Bauchemie • Am Kruppwald 1-8 • 46238 Bottrop • Tel. +49 (0) 20 41-101 10 • Fax: +49 (0) 20 41-101 188
info@mc-bauchemie.de • www.mc-bauchemie.de