

Hybrid silicate coatings

APPLICATION ADVICE

Substrate preparation: The substrate must be dry, i.e. the surface of a fresh crack (depth approx. 2 cm) must not become pale caused by drying. Furthermore there must not appear humidity over night between the construction surface itself and a PE-foil (500 × 500 mm), applied to the building element and only affixed in its lateral face.¹⁾ The substrate must also be clean and free from all loose particles, dust, oil, grease, cement slurry and any other contaminants. The surface pull-off strength has to correspond with the officially known technical rules.

Following preparation the substrate has to bear an adequate roughness. To achieve this rough structure e. g. the surface-near aggregates of concrete have to be exposed.

Reprofiling / levelling: Highly structured surfaces have to be reprofiled using mineral-based mortars prior to application of hybrid-silicate products. In case of constructions that once have been used, in-situ concrete constructions and precast concrete parts a layer of water tight mineral based mortar has to be applied below hybrid-silicate products. These layers also have to provide a rough surface structure (e.g. roughening the surface using a cocos-brush); slight grit blasting is also suitable. Inside edges have to be rounded by fillets made of mortar, outside rims have to be rounded. It is absolutely essential to clean all surfaces to be coated e. g. by vacuum cleaner to remove all loose particles.

Mixing / mixing ratio: Mixing has to be carried out according to the technical data sheet. Only use clean, factory-provided buckets for mixing (bucket of powder component). Do not use mixing buckets twice. Fast running single stirrers (min. 500 rpm) with helical ribbon or basket agitators are suitable for mixing. Immerge the basket fixture completely into the material to minimize air bubbles caused by mixing.

Manual application: Trowels, plastic and steel floats are suitable for manual application of hybrid-silicate coatings. The first workstep must be a thin scratch coat applied with high compaction pressure. The scratch coat is to be overcoated "fresh-to-fresh", also with high compaction pressure. Any trowel marks from hand working must be smoothed out immediately.

Wet spraying technology / spinning application: Hybrid-silicate coatings may be applied by wet spraying technology. Please request our special advice for spray application. It is recommended to apply a precedent thin scratch coat as well.

Advices acc. to spinning application you will find in the data sheet "General Application Advice for spinning application of ombran FT with MRT-technology".

Application conditions: Application time depends on climate conditions. Slightly setting material can be stirred again within 30 minutes after mixing to enhance workability. Please observe the application temperature with regard to air, substrate and material. In case of temperatures below + 10 °C the application of hybrid-silicate coatings must be stopped. Prevent air and substrate temperature from falling below this point during curing phase.

Tools for application: Only use clean tools for mixing and application. Ensure that all tools to be used are free from cement and have not been exposed to this media before. Application tools have to be used for hybrid-silicate coatings only.

Curing: During application and for 24 hours afterwards ombran FT must be protected from water and intense sunlight. A high relative air humidity 80 % optimizes the hardening process. Condensate formation can be tolerated after application. During the time mentioned above the air and substrate temperature must be between + 10 °C and + 25 °C.

1) DAfStb Richtlinie Schutz und Instandsetzung von Betonbauteilen, Teil 2, Ausgabe 10/2001, Punkt 2.3.5 „Betonfeuchte“

Safety advices: Use suitable protective clothes, gloves and safety glasses / safety mask as well as respiratory protection (spray application) for application. Please take notice of the safety information and advice given on the packaging labels and safety data sheets.

Current safety data sheets are available on www.mc-bauchemie.com.

Layer composition

Rehabilitation of constructions that once have been used, in-situ concrete constructions and precast concrete parts (without steel reinforcement exposure)

1. Substrate preparation

Waiting time until next work-step: surface slightly damp

2. Application of bond coat:

ombran HB (manual application): Waiting time until next work-step: "fresh-to-fresh"

3. Application of reprofiling / coating mortar:

ombran MHP (manual application) or **ombran MHP 15** (manual application)

Waiting time until next workstep: 6 - 72 h (generally: overcoating after 24 h observing adequate curing of mortar)

Alternative for 3.: Application of reprofiling / coating mortar:

ombran MHP-SP (spray application)

Waiting time until next work-step: 6 - 72 h (generally: overcoating after 24 h observing adequate curing of mortar)

4. Application of hybrid-silicate coating:

ombran CPS / ombran FT (manual application)

Waiting time until returning to operation of construction: at least 24

Alternative for 4.: Application of hybrid-silicate coating:

ombran CPS / ombran FT (spray application)

Waiting time until returning to operation of construction: at least 24 h

Note: The information contained in this data sheet is based on our experience and is correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual structure, to the specific application and to non-standard local conditions. Application-specific conditions must be checked in advance by the planning engineer/specifier and, where different from the standard conditions indicated, will require individual approval. Technical advice provided by MC's specialist consultants does not replace the need for a planning review by the client or its agents in respect of the history of the building or structure. Subject to this prerequisite, we are liable for the correctness of this information within the framework of our terms and conditions of sale and delivery. Recommendations of our employees deviating from the information given in our data sheets are only binding for us if they are confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be observed. The information given in this technical data sheet is valid for the product supplied by the country company listed in the footer. It should be noted that data in other countries may differ. The product data sheets valid for the relevant foreign country must be observed. The latest technical data sheet shall apply to the exclusion of previous, duly superseded versions; the date of issue in the footer must be observed. The latest version is available from us on request or may be downloaded from our website. [2100004836]