

General Application Advice

Hybrid-silicate coatings

Application

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 work-step must be a thin scratch coat applied

with high compaction pressure. The scratch coat is to be over-coated "fresh-to-fresh", also with high compaction pressure. Any trowel marks from hand working must be smoothed out immediately.

Application by wet spraying technology

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.

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.

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.

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

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

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 work-step: 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 h

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 on this data sheet is based on our experiences and correct to the best of our knowledge. It is, however, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees which differ from the data contained in our information sheets are only binding if given in written form. The accepted engineering rules must be observed at all times.

Edition 06/17. 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.