

PRODUCT DATA SHEET

Sika® Chapdur® BD

Non-metallic mineral dry shake floor hardener

DESCRIPTION

Sika® Chapdur® BD is a one part, preblended, coloured mineral dry shake hardener for concrete comprising of cement, specially selected natural mineral aggregates, admixtures and pigments. Sika® Chapdur® BD provides a extremely hard wearing and abrasion resistant topping for monolithic floors. When sprinkled and trowelled into fresh wet concrete floors, it forms a coloured, dense and wear resistant smooth surface.

USES

Sika® Chapdur® BD is a construction products which only should be applied by trained applicators.

Suitable for use in all cases where floors are subjected to severe mechanical wear and there is a need to apply special hard wearing surface coverings, such as:

- Warehouses
- Factories
- Shopping malls
- Public areas
- Restaurants
- Museums
- Parking lots
- Garages and Service stations

FEATURES

- Ready to use
- Good wear resistance
- High impact resistance
- Cost effective surface hardener
- Makes floor dust proof
- Non metallic and rust free
- Easy to clean
- Increased resistance to oils and grease
- Quality assured factory blending
- Suppresses superficial fibres in concrete

PRODUCT INFORMATION

Composition	Natural mineral aggregates graded and mixed with cement, admixtures and pigments
Packaging	30 kg Bag
Appearance and colour	Natural concrete grey powder
Shelf life	12 months from date of production if stored as per recommendation.
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +10°C and +30°C

Bulk density 1.5 ± 0.1 kg/L at +27°C

TECHNICAL INFORMATION

Abrasion resistance	~1.70 mm wear loss	(ASTMC131/ IS:1237)
Compressive strength	28 days ~60 N/mm ²	(ASTM C 109)
Surface hardness	Between 8 and 9 (Moh's scale)	(EN196-1/ IS:13630 Part 13)

APPLICATION INFORMATION

Consumption	Application	Product	Consumption
	Heavy duty	Sika® Chapdur® BD	5.5 to 6.0 kg/m²
	Medium duty	Sika® Chapdur® BD	4.5 to 5.0 kg/m²
	Light duty	Sika® Chapdur® BD	3.5 to 4.0 kg/m²
Layer thickness	2.5 to 3.0 mm at dosage of ~ 5.0 kg/m²		
Ambient air temperature	+5°C min. / +35°C max.		
Relative air humidity	30% min. / 98% max.		
Substrate temperature	+5°C min. / +35°C max.		
Applied product ready for use	Foot Traffic	Fully serviceable	
	~72 hours	~7 days	
The above values are at substrate temperature of +27 °C and dependent upon the concrete reaching its design strength for serviceability and will be affected by changing ambient conditions, particularly temperature and relative humidity.			

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

- The application of the dry shake powder must not be carried out in strong wind or in dry conditions.
- Variations in concrete characteristics such as water content and cement may lead to slight colour variations.
- Dry shake hardeners give a finish to concrete with some colour variation across the floor due to the natural variability of the concrete onto which they are applied.
- To ensure optimum colour consistency, it is essential that the floor laying operation is as clean and protected from the environment as possible.
- Colour variation during the drying out period is normal for this system and is to be expected.
- Every effort must be made to ensure an even application of Sika® Chapdur® BD. Correct timing and trowelling techniques are essential.
- At low relative humidity, efflorescence can appear on the surface.
- At high relative humidity, bleeding, slower curing and hardening can occur and extended finishing operations be required.
- For mechanical application, use automatic

spreader in conjunction with a laser screed and spread Sika® Chapdur® BD evenly onto the concrete immediately after screeding in one application.

- After application, do not expose such concrete surface to water and protect from rain or contaminants.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

For mechanical application with automatic spreader and laser screed, the spreading can start almost immediately after the concrete has been levelled to allow for the hydration of the dry shake. Compaction with the trowel can start as soon as the weight of the power trowels is supported by the concrete. For manual application, the dry shake must be spread once the concrete can be stepped on, without leaving a print deeper than 3 - 5 mm.

SUBSTRATE QUALITY

- The concrete deliveries must be of consistent quality.

- A concrete slump in the range 75 to 110 mm will normally give best results.
- The slab must be of good quality concrete with a minimum water/cement ratio consistent with the production of a fully compacted slab.
- The compressive strength must be a minimum of 20 N/mm².
- Use of Sikament® or Sika® Viscocrete® super plasticizers is advised to ensure the optimum quality of concrete and where fibers are used, their optimum dispersion within the mix.
- Air Entrained Concrete is not a suitable substrate for the application of dry shake hardeners.

APPLICATION

Broad casting of Sika® Chapdur® BD premix

The concrete slab is ready for the Sika® Chapdur® BD cement coating when a thumb pressed hard onto the surface only leaves a print of about 3-5 mm depth. Sprinkle 60% of Sika® Chapdur® BD onto the screed concrete evenly by hand or with suitable device.

Compaction

Wait until the Sika® Chapdur® BD has been evenly moistened by the water in the concrete. Use a low rpm mechanical trowel, held perfectly flat.

Note : If parts of the surface come loose or if the laitance rises, this means the concrete is still too fresh.

Smoothing

As soon as the plasticity or initial set allows, perform preliminary smoothing with the same machine running at low speed but equipped with metal smoothing blades, set at minimum angle. Sprinkle remaining 40% of Sika® Chapdur® BD onto the screed concrete evenly by hand or with suitable device and 2nd stage of compaction has to be done. Any final smoothing required should be performed later with the machine running at high speed.

Joints

Construction joints, expansion joints and floor joints should be saw-cut only after 24 hours. When the slab has hardened, the joints can be filled with the appropriate Sikaflex Sealant in accordance with the floor requirements.

CURING TREATMENT

Cure Sika® Chapdur® BD immediately after finishing using clean water. For chemical curing, please consult Sika Technical Service team.

Joints:

After finishing operations and completing saw cuts, clean off any residual saw lubricant / slurry without delay. Joints can be filled with Sikaflex® PRO-3WF or any other appropriate Sikaflex® sealant in accordance with the floor design requirements.

CLEANING OF EQUIPMENT

To maintain the appearance of the floor after application, Sika® Chapdur® BD must have all spillages removed immediately and must be regularly cleaned using rotary brush, mechanical scrubbers, scrubber dryer, high pressure washer, wash and vacuum techniques, etc., using suitable detergents and waxes.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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Product Data Sheet

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