



PC-Floorhard®SH

Dry shake floor surface hardener

PC-Floorhard®SH is a pre-formulated non-metallic floor and surface hardener that integrates robust natural aggregates. It is specifically formulated for application through the dry shake method in two phases, ideal for fresh concrete installations and supplementary mortar overlays. The utilization of PC-Floorhard®SH significantly enhances the durability of concrete surfaces, extending the lifespan of floors in diverse environments including industrial, commercial, and residential sectors. Treated floors exhibit enhanced durability, increased wear resistance, reduced dust accumulation, biocompatibility, and necessitate minimal maintenance.

FEATURES

- Easily deployable.
- Demonstrates exceptional durability.
- Exhibits high resistance to impact.
- Offers cost-effective surface hardening.
- Promotes the creation of dust-free floors.
- Corrosion-resistant and non-metallic.
- Streamlines cleaning procedures.
- Enhances resistance to oils and grease.
- Manufactured according to stringent quality standards.

TECHNICAL DATA

Physical Properties	Typical Value
Bulk density	1.5 ± 0.1 kg/L at +25°C
Abrasion resistance	~1.70 mm wear loss
Surface hardness	Between 8 and 9 (Moh's scale)
Compressive strength	~70 N/mm ²
Layer thickness	2.5 to 3.0 mm at dosage of ~ 5.0 kg/m ²
Ambient air temperature	+5°C min. / +35°C max.
Substrate temperature	+5°C min. / +35°C max.
Relative air humidity	30% min. / 98% max

PRODUCTS DETAILS

Composition	Natural mineral aggregates graded and mixed with cement, admixtures and pigments
Packaging	25 kg bags
Colour	Natural concrete grey powder, Green, red, yellow and other as per clients needs
Type of Product	Dry-Shake Floor Hardener

PC-Floorhard®SH is compatible for use on both existing and newly constructed floors. The application methods differ depending on whether the floor is old or new, as detailed in the subsequent Further Instructions/Precautions:

1. For existing concrete floors, apply a compensating screed layer between the old floor and PC-Floorhard®SH.
2. For newly cast floors, integrate PC-Floorhard®SH into the concrete surface during monolithic construction.

USES

- Aircraft hangars.
- Basements and cellars.
- Mechanical workshops.
- Garages for light vehicles.
- Storage rooms.
- Corridors and halls.
- Parking areas.
- Loading platforms.

ADVANTAGES

- The toppings exhibit exceptional durability, making them highly resistant to wear and abrasion. They offer non-dusting, non-slip, and anti-skid properties, even in the presence of oil spills.
- This material is versatile, suitable for both indoor and outdoor use, waterproof, and poses no health hazards.
- Its high density and minimal maintenance requirements make it an ideal choice for existing, new, and refurbished floors.
- Notably, it enhances strength, impact resistance, and provides double the abrasion resistance of standard concrete flooring options.

CONSUMPTION

Heavy duty	6.0-9.0 kg/m ²	For traffic with hard wheels, abrasion, impact, rolling, grinding, sliding of heavy granular goods, heavy foot traffic etc
Medium Traffic	4.0 - 6.0 kg/m ²	For traffic with medium duty wheels, grinding and sliding of light to medium weight granular goods, heavy pedestrian traffic, light automobiles etc.
Light Traffic	2.5 - 3.5 kg/m ²	For traffic with light duty wheels, soft wheels, sliding and rolling of light goods, primarily grinding action, unusual wear and tear, light automobile traffic, heavy pedestrian traffic etc.

APPLICATION INSTRUCTIONS

In the first case, i.e. existing concrete floors, the base concrete should be sound, clean and free from oils and other contaminations to ascertain the proper bonding of the compensating layer, before beginning of the new work. The compensatory screed layer needs to be bonded to the existing surface and can be done using a ready to use polymer mortar Like PC-Floortop®Screed. The screed layer itself should be 25-30 mm thick and should have aggregates (50% of 0- 4 mm and 50% of 4-8 mm), cement (400kg/m³) and w/c of 0.45 to 0.5. This should be well compacted and PC-Floorhard®SH can be broadcast after initial set. New concrete floors should be cast in accordance with best concrete practices.



PC-Floorhard®SH is a dry shake finish that requires a two-step application process. Initially, a designated area on the floor should be demarcated, and the appropriate amount of **PC-Floorhard®SH** should be determined based on consumption needs. It is imperative that the concrete or compensating screed substrate is devoid of any residual bleed water and adequately cured to support light foot traffic. Half or one-third of the total prescribed amount of **PC-Floorhard®SH** should be uniformly distributed by hand or scoops across the surface.

HEALTH AND SAFETY

- Do not apply the product on concrete surfaces that have been exposed to calcium chloride or aggregates contaminated with salt or saltwater.
- Avoid applying the product on concrete with micro silica or containing more than 3% entrained air.
- This product contains cement, which can cause irritation. It is recommended to avoid contact with eyes and prolonged skin exposure. If contact occurs, rinse thoroughly with water and seek medical attention. Keep the product out of reach of children.

STORAGE

Similar to cement, it is advisable to store it in its original unopened packaging in a dry location away from moisture. Avoid stacking more than five bags on top of each other, as prolonged pressure may lead to hardening.

CLEANING

Cleanse the equipment promptly with water once it is no longer in use, and before the cementitious material begins to solidify on the blades, trowels, and other surfaces.

The cement content should be at least 300kg/cum and concrete should have a 28-day strength of minimum 30 N/mm². The bleed water should evaporate and after initial set **PC-Floorhard®SH** can be broadcast. Once the surface material achieves a uniform dark hue from water absorption, it can be smoothed using wooden or steel trowels. However, it is important not to overwork the surface. Subsequently, the remaining quantity should be evenly spread in a similar manner but at a perpendicular angle to the initial application, followed by smoothing. Final finishing touches should be applied using standard methods. For optimal outcomes, it is recommended to utilize vacuum dewatering and power floats. Adequate curing is imperative. Light foot traffic may resume after 18 hours, while heavy loads should be delayed for at least a week. The effectiveness of **PC-Floorhard®SH** is contingent upon proper application. Therefore, it is advised to adhere to the precautions outlined in the following section.

PRECAUTIONS

- Apply **PC-Floorhard®SH** starting from areas adjacent to walls, columns, and bay edges, spreading the product evenly in perpendicular directions through two separate applications for best results.
- The quality of **PC-Floorhard®SH** is influenced by aggregate grading, impacting material quality and final surface finish. It is recommended to use full packs exclusively; if a partial bag is needed, empty a complete bag, mix thoroughly, and use the required portion for consistency.
- **PC-Floorhard®SH** application starts after base concrete sets for light foot traffic.
- Ensure surface is dry to prevent issues like sinking aggregates.
- Proper curing is crucial for strength; use curing compounds like **PC-Buildcure®WB**.

SHELF LIFE

12 Months from date of Manufacture if stored in Unopened Packaging. Protect from Rain, Direct Sunlight, Heat and Frost



PC-WC GLOBAL FZ-LLC

Compass Building, Al Shohada Road Al-Hamra Industrial Zone-FZ,
Ras Al-Khaimah, UAE
Email: info@pc-wc.com
Phone 971542455817, www.pc-wc.com

TECHNICAL DATA SHEET UPDATED IN
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TDS/PC-FLOORHARD®SH/20



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

The information, particularly the recommendations relating to the application and end-use of PC-WC products, are given in good faith based on PC-WC's current knowledge and experience of the products when properly stored, handled and applied under normal conditions by PC-WC 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 any other advice offered. The user must test the product's suitability for the intended application and purpose. PC-WC Global FZ-LLC 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. Our technical assistance is at the disposal of the users. Consult the latest update of the technical data sheet on our website www.pc-wc.com