



## HARDENER 4500- SURFACE HARDENER WITH QUARTZ AGGREGATE

### DESCRIPTION :

Cement based, quartz aggregate surface hardener and performance additives, applied in monolithic manner on fresh concrete surfaces. Enhances abrasion resistance of concrete surfaces on grounds subject to light and medium loads.

### ADVANTAGE:

- Ensures non-dusting, bright, smooth surface floors.
- Easy to clean.
- Improves concrete impermeability.
- Enhances abrasion and impact resistance of surface.
- Creates a surface resistant to freeze-thaw cycle.
- Ensures saving of time thanks to ease and rapid application.
- Economic.
- Three different color options.

### AREA OF USE :

- Industrial & Commercial Floors – Warehouses, factories, workshops, garages, and showrooms where high surface strength and abrasion resistance are required.
- Pavements & Walkways – Outdoor footpaths, driveways, and loading/unloading areas exposed to frequent traffic.
- Concrete Slabs – Fresh or partially cured concrete surfaces to increase surface hardness and reduce dusting.
- Parking Areas & Roads – Light to medium traffic areas needing improved durability and wear resistance.
- Water & Chemical Resistant Surfaces – Some formulations improve resistance to mild chemical exposure and moisture ingress.

### SURFACE PREPARATION :

- The load bearing concrete of the application surface should be minimum class C25.
- Surface of the fresh concrete where the applications plan should be finished with finishing tray and leveled with woc trowel.
- Consistency of concrete is vital for sound application. If applied on overly consistent concrete, the floor hardener will not react since it cannot incorporate sufficient amount of water, whereupon the hardening does not take place. If the concrete is too slurry, then the hardener is caught up in concrete and remains ineffective.
- Wait until the bearing concrete becomes walkable. The ideal time is when 0.5-1.5 cm deep footprints left when stepped on the concrete.

### CONSUMPTION :

- Medium traffic: 3 – 5 kg/m<sup>2</sup>
- Heavy traffic: 5 – 8 kg/m<sup>2</sup>

### APPLICATION:

- Roughly 2/3 of HARDENER-QUARTZ should be spread on the surface. The material should not be left in clusters, distributed as homogenous as possible.
- Also, avoid spreading to long distances not to decompose the aggregates in the product. This process can be done manually or by special spreading equipment.
- Wait scattered material to change color by absorbing the water of the concrete.
- The material should be rubbed into the surface with low cycle rotary float (mechanical trowel) and be ensured to integrate with the concrete.
- The same process is repeated for the remaining material.
- Once the surface is hard enough to the extent that walking on it becomes possible, the final finishing should be performed by high cycle finishing. Switch to knife finishing and continue this process until the desired glossiness is achieved.

### PRECAUTIONS IN APPLICATION:

- Should not be applied to surfaces that were exposed to sunlight for too long or to surfaces that are too hot or frozen.
- Should not be applied when the ambient temperature is not within the values of +5°C and +30°C.
- The application area should be protected from the effects of wind and direct sunlight.
- After the surface hardening application is complete, apply curing agent, surface curing agent, in order to prevent the formation of contraction cracks and dusting.
- Water and cement content of the concrete may cause slight color variances.
- Avoid contact with water on application surface.
- Efflorescence may occur at relative humidity conditions lower than %40.
- The final consumption amount might vary depending on application conditions and surface characteristics.



#### PACKING:

25 kg craft bags.

#### STORAGE AND SHELF LIFE :

Must be stored at temperatures between +5°C and +35°C. Under proper storing conditions, the product's shelf life is 12 months from production date if kept in original packaging unopened and undamaged. Packaged products must be shaken before use.

#### SECURITY INFORMATION :

Use protective clothes, gloves, glasses and mask compatible with Health and Safety regulations during the application. It should not contact skin and eyes. In case it contacts to skin and eyes, rinse it with water and if swallowed ask for medical help. Food and beverage should not be allowed in the application area. It should be stored at the reach out of the children. The Material Safety Data Sheet (MSDS) should be read for detailed information.

#### TECHNICAL PROPERTIES:

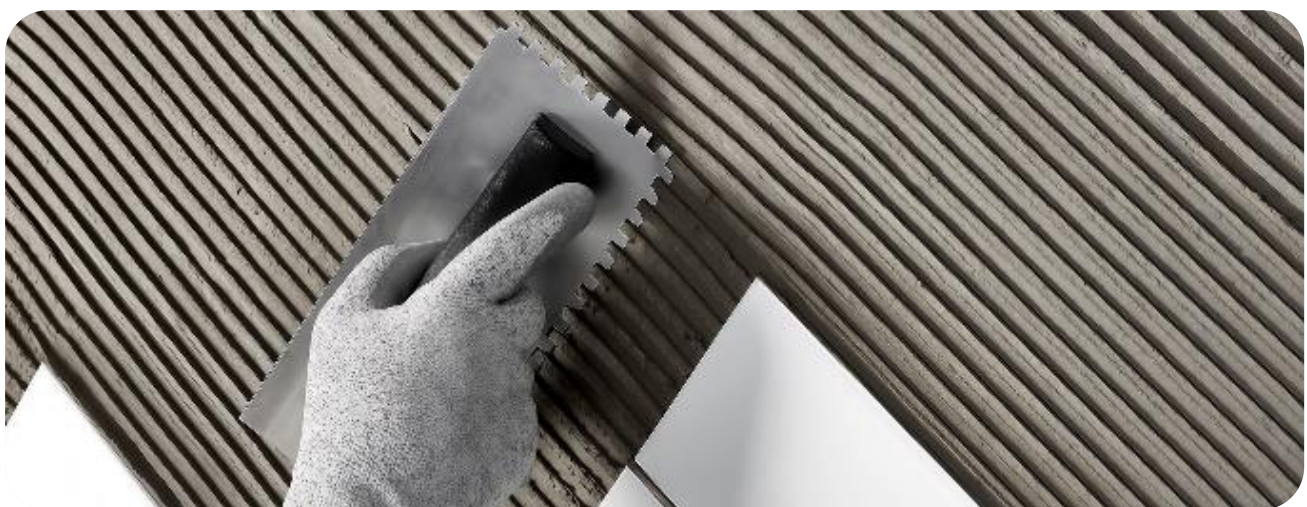
Appearance	Grey / Red / Green powder	-
Pot Life	Min. 45 Minutes	-
Application Temperature	Between +5°C and +35°C	-
Mixing Ratio	3.5 -4. 5 L water / 25 kg powder	-
Application Thickness	max. 75 mm (per layer)	-
Consumption	4 – 8 kg/m <sup>2</sup> depending on intended use and traffic load	-
Appearance	Grey / Red / Green powder	-

#### PERFORMANCE

Compressive Strength (28 days)	≥ 60 N/mm <sup>2</sup>	EN 196-1
Abrasion Resistance (Böhme Method)	≤ 3.0 cm <sup>3</sup> / 50 cm <sup>2</sup>	EN 13892-3
Reaction to Fire	A1	EN 13501-1

Hereby technical values and product application instructions are obtained in the wake of tests conducted in environment of +23±2°C temperature with relative humidity of %50±5. Higher temperatures will shorten the time span, while lower temperatures will extend it.

WE ARE HERE , DO NOT WORRY ABOUT THE STANDARD



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