

FLOORHARD E

NATURAL AGGREGATE SURFACE HARDENER

DESCRIPTION

Aftek FLOORHARD E is a pre-mixed, ready to use powder composed of cement, selected wearing mineral aggregates and blended with hydraulic binders. Aftek FLOORHARD E designed to be applied as a dry shake floor hardener over freshly floated concrete floor and bonds monolithically to the base concrete provides a high abrasion resistant and hard wearing surface to concrete floors.

FEATURES AND BENEFITS

- Good abrasion resistance
- Non-metallic, does not rust or stain
- Reduce dusting
- Uniform and intense colour
- Easy and economical to apply

RECOMMENDED USE

Aftek FLOORHARD E is designed to use for surface hardening of floor slabs which are not exposed to serious chemical attack and where uniform appearance and enhanced abrasion resistance are desired.

It is suitable for floor areas of:

- Warehouses
- Parking areas
- Basement and cellars
- Loading platforms
- Engineering workshop
- Light industrial and commercial building

INSTALLATION INSTRUCTIONS

SUBSTRATE REQUIREMENT AND PREPARATION

Concrete for single course monolithic floors should be capable of achieving a 28 days compressive strength of 25 Mpa (30 Mpa for heavy duty traffic areas). Concrete should not contain calcium chloride.

Air Entrained Concrete is not a suitable substrate for the application of dry shake hardeners.

Water-Cement ratio (w/c) must not be too low as some water is required for hydration of the Aftek FLOORHARD E. Generally recommended w/c for the concrete are between 0.45 and 0.55 and must be consistent while being poured.

TECHNICAL DATA & PROPERTIES

Composition	Natural mineral aggregates graded and mixed with cement, admixtures and pigments.
Hardness on Moh's Scale	7 ~ 8
Flexural strength	> 8.0 N/mm ²
Compressive strength	> 60 N/mm ²
Abrasion resistance	Applied at 5kg/m ² exhibited >300% greater abrasion resistance than control concrete
Impact resistance	0.15mm - No sign of crack or disbonding was observed

Specification are subjected to change without notification. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation methods, site conditions and use environment.

Place concrete and consolidate with vibrators if necessary. Strike off concrete level. Further level and consolidate using a wooden bull float. Complete this operation before any bleed water appears. If there is free-bleed water on the surface, remove it just prior to the floating. The base concrete should then be allowed to stiffen sufficiently to bear the weight of a finisher before proceeding to the next stage.

SETTING UP

Prior to apply the floor hardener it is suggested that the product with quantity be laid out along either side of the pour to ensure the correct application rate.

APPLICATION

Once the concrete has been leveled and allowed to stiffen to a point where light foot traffic does not leave an imprint of more than 3~5mm, it is ready to receive the application of Aftek FLOORHARD E.

Any excess surface or bleed water shall be removed prior to application to avoid adverse effect on strength of the product. The application should be timed to avoid being late where there is insufficient moisture left to complete the hydration of the materials and resulting in pitting and crazing effects of the floor finish.

APPLICATION (continue)

Aftek FLOORHARD E should be applied in two coats using a dry shake method of uniformly broadcasting the product onto the surface of the freshly placed concrete. Broadcast 2/3 of the Aftek FLOORHARD E onto the fresh concrete surface. Float the broadcasted material into the surface with a mechanical or manual float after the hardener achieves a uniform moistened appearance. The first application should be applied as soon as the surface water disappeared. The product is dusted onto the surface to give an even appearance. The first application is allowed to soak up water from the base concrete before being floated into the surface. Light floating shall be performed to compact it to prepare the concrete surface to receive the second dose of the remaining materials. Do not use steel trowel. When the water sheen has again disappeared, broadcast the remaining 1/3 of the Aftek FLOORHARD E onto the surface. After the second dose of material is fully applied, the floor is again compacted using mechanical power float until dense finish is achieved. Float the concrete surface in the same way as before. After the surface has achieved proper firmness, proceed with normal finishing procedures. Do not over trowel. The edges of slab along formwork and areas near doorways will dry at a faster rate than the rest of the pour and must be watched to ensure that the surface gets the required dose and is floated up while there is still sufficient moisture available.

CURING

Proper curing must be carried out immediately after the final finishing of the product to prevent rapid water loss which may result in surface cracks. Final finishing of the floor using the blades of a power float can be carried out when the floor has stiffened sufficiently so that damage will not be caused. As soon as the surface will not be marred, apply proprietary curing agent. Alternatively, polythene sheet may be used where external condition permits.

CLEAN UP

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

CONSUMPTION AND COVERAGE

Aftek FLOORHARD E is applied at rates per m² to provide floor surfaces suitable for different grades of floor use.

Intended use	Application rate
Heavy Traffic	5.0 ~ 6.0 kg/m ²
Moderate Traffic	4.0 ~ 5.0 kg/m ²
Light Traffic	3.0 ~ 4.0 kg/m ²

LOADING

Depending on the temperature and the type of cement used in the base concrete, the loading waiting time is:

- For foot traffic 24 – 48hrs
- For light traffic 7 – 12days
- For normal traffic > 28days

PACKAGING

AFTEK FLOORHARD E is available in 25kg bag. Available in Natural and colours.

SHELF LIFE AND STORAGE

Aftek FLOORHARD E has a shelf life of 12 months. Store in a dry area off the ground on pallets protected from water contact. Store all materials in a cool dry place, in an elevated condition.

PRECAUTIONS

- Do not apply over concrete containing added calcium chloride.
- Do not apply over concrete containing aggregate contaminated with salt or salt water.
- Do not apply over concrete containing more than 4% entrained air.
- The application of the Aftek FLOORHARD E must not be carried out in strong wind which will cause segregation and uneven appearance.
- Colour variation during the drying out period is normal for this system and is to be expected.

HEALTH AND SAFETY

- Aftek FLOORHARD E is non toxic but it is alkaline in nature. Any contact with eyes or skin should be washed off with clean water.
- Protective gloves and clothing should be worn during application and finishing operations.
- For information and advice on the safe handling, toxicological and other safety related data of the product refer to Material Safety Data Sheet .

Disclaimer :

The information and any recommendations relating to the application and end-use of all Aftek products are provided in good faith based on Aftek's knowledge and experience of the products. In applications, the differences in materials, and variances of substrates and actual site conditions can vary such that no warranty in respect of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be taken as inferred either from this information, or from any written recommendations, or from any other advice offered by Aftek. The proprietary rights of third parties must be observed. All orders are accepted subject to our sale terms and conditions. All users should always refer to the most recent and up to date issue of the Technical Data Sheet for the product concerned, which is available on request. It is recommended that products should always be properly stored, handled and applied under tested and recommended conditions.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

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