PaveCrete 103

Emery-Based Floor Hardener

DESCRIPTION • *PaveCrete 103* is a ready-to-use, colored, metal-free cementitious floor hardener designed for application by the dry shake method over freshly poured concrete surfaces. Formulated with graded Emery aggregates, plasticizers and admixtures, it provides a hard-wearing and abrasion-resistant surface.

USES • *PaveCrete 103* is suitable for use in warehouses, manufacturing plants, garages, aircraft hangers and power stations.

ADVANTAGES •

- ✓ Contains hard wearing non-metallic particles, which provide an exceptionally durable surface that will not rust when wet.
- ✓ Increased wear and abrasion resistance to conventional standard concrete.
- ✓ Provides a high density surface that is oil and grease resistant, dust reducing and easy to clean and maintain.
- ✓ Exterior and Interior application.
- ✓ Ready and easy to use.
- ✓ Available in a 40 standard colors.

PHYSICAL PROPERTIES • Physical properties of aggregates:

Aggregate hardness on the Moh scale	9
Size of aggregates	1-3 mm
Shape of aggregates	Angular
Compressive strength @ 28 Day	85 N/mm^2
Abrasion resistance (BS 8204 Classification) AR SPECIAL	 3 kg/ m^2 5 kg/ m^2
Minimum Abrasion Δ over Regular Concrete	300-550%
Density	1,700 kg/m^3

CONCRETE MIX • The base concrete should contain a minimum of 300 kg of cement per cubic meter. All aggregates must be clean and free of particles that may deteriorate; the water cement ratio should be less than 0.55; and the slump should not exceed 10 cm. The base concrete should be poured and compacted in accordance with good concrete practice. Avoid the addition of calcium chloride or any admixtures containing calcium chloride. Do not use water-reducing admixtures (super plasticizer). Additionally, all aggregates in the concrete mix must be non-reactive and free of deleterious materials.

COVERAGE • Application rate depends on project conditions and expected use.

- Light duty 3 kg/m^2
- Medium duty 4 kg/m^2
- Heavy duty 5 kg/m^2

APPLICATION • It is essential that application over the entire surface is completed while sufficient moisture in the concrete is present to assure proper infusion of the powder into the surface. Therefore, it is highly recommended that required labor, materials and machinery are prepared and made available well in advance of initiating the application. Conversely, application of the powder too early when excessive amounts of moisture are present will lead to poor results.

When working under conditions of high winds, wind breaks or barriers should be constructed around the work area. The concrete should first be spread, screeded, and vibrated so that it completely fills all the space inside the form. Before the appearance of excess moisture, the surface should be floated using wood or magnesium floats to the desired level and flatness. DO NOT TROWEL THE SURFACE PRIOR TO APPLICATION OF *PaveCrete 103*; trowelling closes the surface, making it difficult to work the hardener into the surface. Application of *PaveCrete 103* must begin only after excess and bleed moisture have disappeared from the surface and the floating process would not disrupt the level of the surface, but while the concrete is still plastic throughout. **DO NOT** attempt to absorb bleed water by applying the hardener at an early stage. **Water must not be sprinkled** or otherwise added to the surface during application or finishing. The necessary moisture for the hardener must come from the concrete in order to develop a proper bond and assure adequate density of the surface.

It is recommended to divide and mark the floor into sections of known areas in order to set aside the proper amount of material to be applied to each section. *PaveCrete 103* should be applied over two shakes; two thirds of the material in the first application and one third in the second. For application rates higher than 5 kg/m^2, *PaveCrete 103* should be applied over three shakes, with one half of the material applied during the first shake.

Apply the material by broadcasting over the surface at less than knee height. Do not throw material a distance more than 1 meter. The edges of the slab should be worked first since they set quicker. After each shake, the surface must be thoroughly floated in order to work the material into the surface. The surface must **NOT** be trowelled between the first

and final shakes. Never sprinkle or add water to the surface. After the application of the final shake, the surface should be floated and then trowelled once it has hardened sufficiently. Hard trowelling should be minimized and consistent finishing used to ensure uniformity of the surface. Do not over-trowel in order to minimize trowel-burn and discoloration.

Mechanical Floating/Trowelling: In case of the use of a power float/trowel, application of the hardener by the dry shake method may be carried out in a single pass once surface moisture has completely disappeared. After the surface has hardened enough to take the weight of the machine and operator, the surface may be power floated. The surface is then left to harden further before it is power trowelled. Power trowelling is carried out in several stages, increasing the pitch angle of the blades with each stage until the desired surface smoothness and finish are achieved. Manual trowelling and floating are not necessary except in tight areas and edges where the machine might not cover the surface thoroughly.

CURING ● Curing should be carried out immediately after completion of trowelling either by conventional methods or by the application of curing agents.

CLEANING ● Clean all tools and equipment promptly with clean water.

STORAGE ● Keep material covered to prevent exposure to moisture. Store in a dry area.

SAFETY PRECAUTIONS ● KEEP OUT OF REACH OF CHIDREN. DO NOT TAKE INTERNALLY. Portland cement and silica based products present health hazards. Irritating to eyes and skin. Use in adequate ventilation and do not breath dust. May cause delayed lung injury (silicosis). Use neoprene gloves and a dust mask when handling. In case of contact with skin, wash immediately with fresh water. In case of contact with eyes, wash immediately with fresh water and seek medical attention. FIRST AID: Eyes – Do not rub eyes, immediately flush with fresh water. Skin – Wash with soap and water. Inhalation – If experience difficulty breathing or if inhaled, move to fresh air. If symptoms persist, seek medical attention.

PACKAGING ● 35 kg paper bags.

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