

CAT. No. FLR-01-2010

HARDTOP

Emery Based Concrete Floor Hardener

HARDTOP is a dry powder shake, floor hardener consisting of cement, hard wearing emery aggregates and chemical additives. **HARDTOP** is designed to be an integral part of fresh concrete slabs or screed to provide a dense, tough surface capable of withstanding severe abrasion from constant wheel traffic.

USES

HARDTOP is used wherever floor surfaces will be subjected to heavy usage, wherever abrasion resistant non-rusting floors are specified. Some specific areas recommended for treatment with **HARDTOP** are:

- Warehouse
- Processing plants
- Loading docks
- High volume foot traffic aisleways
- Industrial floors
- Machine shops
- Freight terminals
- Ramps
- Parking decks

ADVANTAGES

- Provides a high strength, hard wearing, monolithic surface.
- Gives up to 5 times the abrasion resistance of plain cured concrete.
- Dense surface resists penetration of oil, grease and other liquids.
- Non-rusting.
- Non-dusting; easy to clean and maintain.

TYPICAL PROPERTIES

1. Emery Aggregates

- MOH Hardness	9 (Diamond 10)
- Abrasion value	1.9
- Impact Value	8.0
- Emery content (Al ₂ O ₃)	62%

2. Compressive Strength

When mixed with water to produce a screedable mix, typical compressive strength obtained is 75 N/ Sq.mm.

3. Abrasion Resistance (ASTM C 779 Method C)

Depth of wear after 20 minutes	<u>HARDTOP</u> 0.58mm	<u>Plain Concrete</u> 2.950mm
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APPLICATION RATE

HARDTOP is applied over fresh concrete slab in 2 stages at an overall rate of 5 kilograms per square meter.

DIRECTIONS FOR USE

1. The concrete mix design should be built around a minimum cement content of 300 kilograms per cubic meter, maximum free water – cement ratio below 0.54, maximum air content of 3% and slump of 50-75mm.
2. Estimate the amount of **HARDTOP** required per square meter per bay then stack the number of bags at each bay to be placed on a particular day. Measure the length of the slab to a point where full bags can be used (Eg. A bay

measuring 2.86 meter width and 7 meter length will require 4 bags **HARDTOP**). Mark these points with temporary marker.

3. On two course slabs, saturate the base concrete with water at least one hour before placement. Just immediately before concreting, remove any excess, free standing water by compressed air. Where application will be slab on grade, saturation is not required. Generally, the surface must be damp, and free from dirt and contaminants.
4. Place, spread, compact and level fresh concrete in accordance with the recommendations detailed in ACI 302.
5. Allow concrete to stand for some time. After the concrete has stiffened to a point where light foot traffic leaves an indentation of 3-6 mm, and when bleed water has disappeared, open the surface by bull floating or wood plastic float to bring-up little water at the surface. Apply the first shake immediately (Two-thirds of the required amount). Allow **HARDTOP** to absorb water until uniformly dark then float the surface manually with a wood or plastic float.
6. Immediately after floating the first shake, apply the final second shake (one-third of the required amount) and repeat as before. Always make sure not to over-trowel.
7. Final finishing of the floor should be done using mechanical power float and as soon as the concrete has stiffened to a point where power floating will not cause damage to the floor.

CURING

Immediately after power floating, cure and seal the surface with **ISOCRYL 100** applied at the rate of 5-6 square meters per liter. Due to differential absorption, a second treatment may be required to achieve a uniform sheen. Second treatment can be applied the next day at the rate of 6-8 square meters per liter.

HEALTH / SAFETY

HARDTOP contains cement which may cause irritation to skin and eyes. Workers should wear gloves and eye protection. Avoid inhalation of dust. Any spill to the skin or eyes should be immediately washed with water. If irritation persists, seek medical attention. Refer to MSDS for more information.

PACKING/ COVERAGE

HARDTOP is packed in 25 kg plastic bag and will cover 5 square meters. **HARDTOP** is available in cement grey colour only.

STORAGE

Store as in cement in dry covered area.

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Technical information, data are to be considered as typical values and not sales specification. Actual measured values may vary due to factors beyond our control. Indications concerning function and application of the products are empirical. Although the information is believed to be accurate, there is no warranty by ISOLA. None of the recommendations becomes part of the warranted quality of the products. Due to the fact that the conditions of individual use are beyond ISOLA's direct and continuous control, ISOLA disclaims all responsibility in connection with the use of its products and does not warrant against any loss direct or consequential

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