

HARDONATE NR

Non-Oxidizing Metallic Floor Hardener

DESCRIPTION

HARDONATE NR is a non-oxidizing metallic powder designed to be incorporated into concrete floors to produce heavy duty, dense and tough floor surfaces able to withstand wear, abrasion, impact damages and dusting. **HARDONATE NR** floors resist the penetration of oils, grease, industrial chemicals and other aggressive liquids.

Each batch of **HARDONATE NR** is uniformly ground, segregated and recombined in a selected gradation with added dispersing and plasticizing agents so that finished floor attains a uniform color and texture.

HARDONATE NR is completely inert, does not oxidize or rust and is unaffected by acids, alkalis and other harsh chemicals.

FUNCTION

When **HARDONATE NR** is added to the topping mix, it fills up the voids in concrete with high strength iron particles which results in a dense, compact, impermeable surface highly resistant to abrasion and wear.

USES:

HARDONATE NR is recommended for use on all interior and exterior surfaces where hard, dust free, wear and abrasion resistant surfaces are required. Some typical application areas are;

- INDUSTRIAL FLOORS
- WAREHOUSES
- AIRCRAFT HANGARS
- LOADING BAYS
- CAR PARKS
- POWER PLANTS
- CHEMICAL PLANTS
- WORK SHOPS
- SHIPYARDS
- HELIPADS
- REFINERIES
- BAKERIES
- TEXTILE MILLS
- JUTE MILLS
- PHARMACEUTICAL PLANTS
- CEMENT PLANTS
- TOBACCO FACTORIES
- RAILWAY STATIONS
- SPORT FACILITIES
- SUPER MARKETS

FEATURES & BENEFITS:

- IMPACT RESISTANT
- NON STAIN
- HARD WEARING
- NON RUSTING
- SKID RESISTANT
- DUST PROOF
- ABRASION RESISTANT
- ECONOMICAL IN LONG RUN
- LONG LIFE
- NO GRINDING / POLISHING
- NO MAINTENANCE
- CHEMICAL RESISTANT

METHOD OF APPLICATION:

HARDONATE NR topping is laid over freshly laid concrete. The base concrete should be designed to have a minimum cement content of 320 Kg per m³, with low water cement ratio. The base concrete should be placed in accordance with good concrete practice and extra care should be exercised at corners and edges to obtain good compaction.

APPLICATION METHODOLOGY:

1. The base floor slab is to be laid as per design specifications.
2. The base slab should be leveled and well compacted and should be free of any chloride based admixtures and air entraining agents.
3. Remove any excess water and wood float to open the surface.
4. **HARDONATE NR** topping should be laid to a minimum thickness of 20 mm.
5. The base slab should be at least 50 mm thick.
6. **HARDONATE NR** topping should be placed immediately after the pouring of base concrete. For optimum results, it should take place within 1 to 3 hours of placement of base concrete, depending upon the weather conditions.
7. The topping mix is prepared as a 1:2 Cement aggregate mix with **HARDONATE NR** added at a dosage rate of 12.50 Kg per 50 kg bag of cement. The aggregate size must not exceed by 1/3rd of the topping thickness.
8. Wood float the base concrete to open up and achieve a uniformly smooth and level surface. Remove excess bleed water.
9. The Hardonate NR topping mix is preferably mixed in a concrete mixer, maintaining a low water cement ratio.

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10. The topping mix is placed and worked similar to any flooring concrete.
11. The topping is first wood floated and then steel troweled till the surface attains the desired finish.
12. The final steel trowelling should be delayed for as long as possible and should be continued till the surface is completely closed, with no pin holes and till a smooth glass like finish is obtained.
13. Use of mechanical trowels will produce the best results.

CURING:

HARDONATE NR topping should be cured for at least 07 days with a spray of clean water or application of a suitable curing compound such as Mitchell Hardocure. During the curing period the surface should be protected from traffic and other potential hazards.

COVERAGE:

0.3 kg / SFT for 20 mm topping

STORAGE & SHELF LIFE:

HARDONATE NR will retain its properties for at least 12 months when kept in the original packing.

PACKAGING:

50 Kg bags.

PRECAUTIONS

- Do not apply over concrete containing calcium chloride.
- Do not apply over concrete containing aggregate contaminated with salt or salt water.
- Do not apply over concrete containing free water on the surface.
- Do not add water for finishing purposes.
- Do not apply over concrete containing more than 3% entrained air.
- Use only admixtures which are approved by Mitchell.

TECHNICAL ASSISTANCE:

For further details and assistance for specific application requirements and for other product information please contact Mitchell.