

SpEC Armourtop EM9

EMERY BASED, DRY SHAKE, MONOLITHIC SURFACE HARDENER FOR NEW CONCRETE FLOORS

DESCRIPTION

SpEC Armourtop EM9 is supplied in 25kg hermetically sealed polyethylene bags and consists of graded emery aggregate blended with Ordinary Portland cement and plasticisers.

SpEC Armourtop EM9 is applied to plastic concrete and the resulting finished surface is extremely dense, abrasion resistant and hard wearing. As the application of **SpEC Armourtop EM9** results in the floor curing monolithically with the topping, excessive shrinkage, cracking etc., is avoided.

The emery aggregate used, apart from being completely inert chemically, is exceptionally hard and is not prone to polishing.

TYPICAL USES

SpEC Armourtop EM9 can be used in any application where an uncoated concrete is required to provide high abrasion, skid and impact resistance.

It is particularly suited for heavy industrial wear.

ADVANTAGES

- Non-metallic aggregate
- No additions required - ready to use
- Extremely hand-wearing emery aggregate resulting in high resistance to abrasion and impact resistance
- Monolithic bond to host concrete
- Resistant to oils and greases

TECHNICAL DATA

Compressive strength 28 days 70N/mm²

Abrasion resistance

Test data indicates that concrete floors treated with **SpEC Armourtop EM9** exhibit an abrasion resistance 400% better than that exhibited by 40N/mm² concrete on its own.

Hardness

When tested against the Mohs hardness scale, the emery aggregate used in **SpEC Armourtop EM9** provided values in excess of 9.2.

Impact resistance

Testing in accordance with BS 8204 part 1:1987 gave results 5 times better than those required of a screed designed to withstand heavy traffic.

APPLICATION

Preparation

It is essential that adequate planning of the application is made in advance and that sufficient material is laid out to meet the requirements of the application.

The base concrete slab should have a thickness not less than 80mm and the concrete mix design should be formulated as follows:

Water / cement ratio	< 0.50
Cement content/m ³	> 300kg
Slump	> 75mm
Air entrainment	< 2%

Vacuum dewatering should not be used.

Application

SpEC Armourtop EM9 should be applied at the rate of 5 to 7kg/m² depending on the degree of traffic anticipated (medium to heavy traffic respectively).

SpEC Armourtop EM9 must be applied as soon as the base concrete has reached the stage where light foot pressure leaves an indentation of around 5mm or as soon as it is practicable to apply the product correctly without damaging the plastic surface of the base slab.

On large applications, it is essential that sufficient operatives are available to work at a controlled rate behind the concreting team

SpEC Armourtop EM9 is applied in two applications. The first application utilizes two thirds of the chosen application rate and is broadcast evenly across the surface but ensuring the material lands nearly vertically rather than spread horizontally. Once applied, the free water in the base concrete will slowly darken the applied material and once this stage is complete, wood floating of the surface can commence. Do not over-trowel at this stage.

The remaining one third of the material can now be applied and moisture allowed to combine with the material as before and wood floating of the surface can then be completed. Once the floor has attained a degree of stiffness at which light foot trafficking does not mark the surface, steel floating and/or power floating can progress.

CURING

SpEC Armourtop EM9 should be cured with a curing membrane such as **SpECcure AC**, which has a curing efficiency greater than 75% when tested to BS 7542: 1992 "Method of test for curing compounds for concrete".

Continuous polyethylene sheets taped at the edges is an acceptable alternative.

LIMITATIONS

SpEC Armourtop EM9 must not be used in floor areas which are likely to be exposed to acids or any other product which is known to attack Ordinary Portland cement concrete.

PACKAGING & YIELD

SpEC Armourtop EM9 is supplied in 25kg heat sealed polyethylene bags.

Medium duty 5kg/m²
Heavy duty 7kg/m²

STORAGE & SHELF LIFE

The shelf life of the product in sealed bags is typically in excess of twelve months.

Storage at high ambient temperatures or on high humidity environments may reduce the shelf life of the product.

HEALTH & SAFETY

SpEC Armourtop EM9 is alkaline in nature and in a moist environment may be harmful and irritation to the skin, eyes and respiratory system.

Wear dust mask, gloves and goggles during handling. Skin contact should be treated with soap and water.

Contact with eyes should be treated by rinsing well with copious amounts of water prior to obtaining medical advice.

FLAMMABILITY

SpEC Armourtop EM9 is non-flammable.

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