# VANDEX AM 10 (LM)

Integral crystalline waterproofing admixture powder that self-heals and seals concrete.

## DESCRIPTION

VANDEX AM 10 (LM) is an integral crystalline admixture powder specifically formulated to interact with concrete capillary pore structures to provide a waterproofing system that is a permanent part of the concrete matrix. VANDEX AM 10 (LM) can be used in above- and below-grade applications. Active chemicals combine with the free lime and moisture present in the capillary tracts and pores, to form insoluble crystalline complexes. These crystals block the capillaries and minor hairline shrinkage cracks in the concrete to prevent any further water ingress (even under pressure). However, the concrete will still allow the passage of water vapour through the structure (i.e. the concrete will still be able to "breathe").

## BASIC USES

- Water and waste water treatment facilities
- Foundations and basements
- Marine structures
- Precast concrete
- Tunnels and subways
- Dams and water reservoirs
- Manholes
- Underground vaults
- Parking structures
- Swimming pools
- Water containment structures

## FEATURES & BENEFITS

- Eliminates or reduces water penetration
- Water resisting concrete admixture EN934-2:T9
- Interior or exterior waterproofing against high hydrostatic pressure, PRAH (ACI 212.3R-10 Ch.15.1)
- Easy to use powdered material
- Negligible effect on working time, increasing flexibility
- Self-healing properties, sealing cracks up to 0.4mm
- Highly improves chemical resistance
- Very economical compared to other methods
- Vapour diffusion in concrete is not blocked

## PACKAGING

20 kg bags. Others on request.

## SHELF LIFE

When stored in a dry place in unopened, undamaged original packaging, the shelf life is 12 months.

## DIRECTIONS FOR USE

VANDEX AM 10 (LM) can be used in drum mixed and central batched concrete applications. It should be added to the initial batching sequence preferably as the aggregate is being added to the mixing vessel. Concrete should be mixed a minimum of 8–10 minutes, at normal mixing speed, after all concrete constituents have been batched to ensure thorough dispersion of all materials. VANDEX AM 10 (LM) should not be added to the concrete mixture after the cementitious ingredients have been introduced.

## DOSAGE

VANDEX AM 10 (LM) is typically dosed at 1 to 2% by weight of cementitious material (BWC) depending on application. Please consult your local Vandex representative for further dosage recommendations.

## SAFETY PRECAUTIONS

- VANDEX AM 10 (LM) should be added to the aggregate as it is being batched or to the initial batching sequence.
- Do not add VANDEX AM 10 (LM) at the end of the batching sequence. Adding VANDEX AM 10 (LM) to the end of the batching sequence may result in extended setting characteristics or premature stiffening of the concrete.
- VANDEX AM 10 (LM) may require a slight increase in air entrainment dosage.
- In all cases, consult the Safety Data Sheet before use.
- Preliminary testing is encouraged to ensure concrete performance of all project concrete ingredients.
- Setting times may be slightly extended depending on cement chemistry. However, under normal conditions, VANDEX AM 10 (LM) will provide a normal set concrete.

## TYPICAL TECHNICAL DATA

| TEST TYPE | METHOD | TEST PARAMETERS APPROX | PERFORMANCE RELATIVE TO CONTROL |
|---|---|---|---|
| Water penetration | DIN 1048 | 5 bar pressure head | 40% reduction |
| Water permeability CRD C48-92 | CRD C48-92 | 13.8 bar (200 psi) head pressure | > 70% reduction |
| Capillary absorption | ASTM C-1585 | | 40% reduction |
| Potable Water Compliance | NSF 61 (USA) | | No harmful effects in potable water contact. |
| Length Change | ASTM C-157 | | up to 20% reduction |
| Sulphate resistance | ASTM C1202 | 6 months | 33% improvement |
| Admixtures for concrete | ASTM C-494 | type S, performance | passed |
| Chloride ion content | EN 480-10 | | < 0.1 M % |
| Alkali content | EN 480-12 | | < 10.5 M % |
| Corrosion behaviour | EN 480-14 | | no corrosion observed |

Note: The performance of Vandex AM10 (LM) is subjected to the concrete constituents and mix design