IMRAE

QUALITY THRU PRODUCT INNOVATION

CoatMasters®

"A penetrating sealer designed to protect concrete from water surface exposure and penetration".

Product Information

IMRAE manufactures a line of Penetrating Sealers of both reactive and non-reactive system designed for various surfaces, which repel water immediately upon cure, and provide a long term protection from efflorescence and various salt build-ups.

CoatMasters® 2007 and **2007R reactive**, are novel product technology made from new generation of oligomeric silicon emulsions and other trade secret blends designed to protect concrete from salts, moisture, and other fluids. All products are compatible with most types of major cementitious mix design compositions from Type I, II/V, and III formulations.

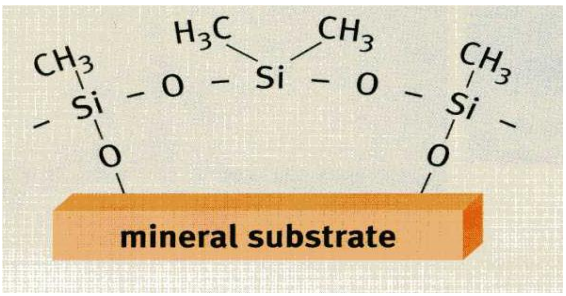
The upper brick's right side area was coated whereas the left area was uncoated, and then immersed in water for a period of 7-days per ASTM C-76 for efflorescence testing. Looking at the upper brick, on the left edge shows signs of efflorescence beginning to occur, while the coated side remains clear and closely matches the original appearance and color of a new brick, shown in the photograph (lower brick).

Additional benefits include excellent color retention and uniformity, provides resistance to bacteria growth, mildew, and fungus formation on damp areas.

The silicones or silanes used in the hydrophobisation of construction or construction materials can be subdivided into three classes:

- Monomeric alkyl alkoxy silanes
- Oligomeric alkyl alkoxy siloxanes
- Polymeric siloxanes

All three types form a 3-dimensional resin like network after application and curing. Their chemical stability to the silicate components of building materials produces a stable and durable bond to most mineral substrates. At the same time, the alkyl groups orient themselves towards the exterior (air) side and protect the surface, acting rather like microscopic umbrellas to protect against the penetration of humidity.



Growing environmental consciousness and official regulations demand low VOC or no-VOC on various types of coatings in general. **CoatMasters®** line of Penetrating Sealers are designed to have very low VOC's, which meets Rule 1113 of the South Coast Air Quality Management District's requirement for Waterproofing Concrete / Masonry Sealers of 100 grams/liter maximum.

Performance Characteristics

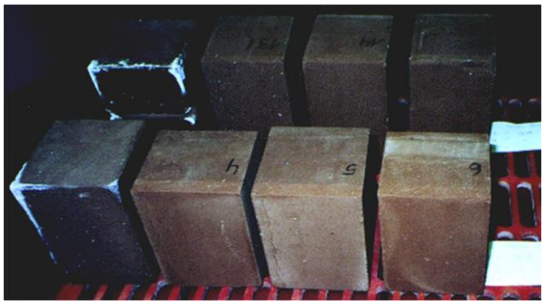
Benefits when used as a Penetrating Coating:

- Eliminates efflorescence effect from cementitious composition.
- UV stable and non-degradable from long term exposure.
- Provides excellent water repellency from water and chloride salt water solutions.
- Reduced salt transmission and chloride ion penetration on rebars, thus providing additional corrosion protection.
- Excellent freeze thaw stability greatly reduces tendency for spalling.
- Maintains natural appearance of any cementitious substrate materials.
- Protects structure from various harmful growths of mosses, fungi, and algae.
- VOC compliant < 100 grams / liter, meets AQMD Rule 1113 for impregnating coatings.

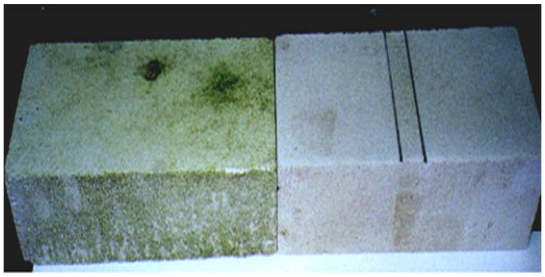
Meets ASTM Performance Standards:

ASTM E514-90 – Determines resistance to water penetration and leakage through unit masonry subjected to wind-driven rain.

ASTM C-666 Determination of resistance of concrete to rapid freeze thaw cycles and thawing (50 cycles).



Effloresence Testing (Black Bricks Uncoated)



Bacteria Testing 3-Months Weatherability Exposure