SPEC DATA

Vapor Lock™ 40/40

Corrosion Inhibiting Admixture
ASTM C494 Type S Admixture

MasterFormat Involving Vapor Lock -

03 00 00 Concrete -
03 30 00 Cast-in-Place Concrete
03 31 00 Structural Concrete
03 37 00 Specialty Placed Concrete/Shotcrete
03 38 00 Post-Tensioned Concrete
03 40 00 Precast Concrete
03 50 00 Cast Decks and Underlayment
03 70 00 Mass Concrete
31 30 00 Earthwork Methods -
31 32 33 Shotcrete Soil Slope Stabilization
31 32 36 Soil Nailing

Product Description

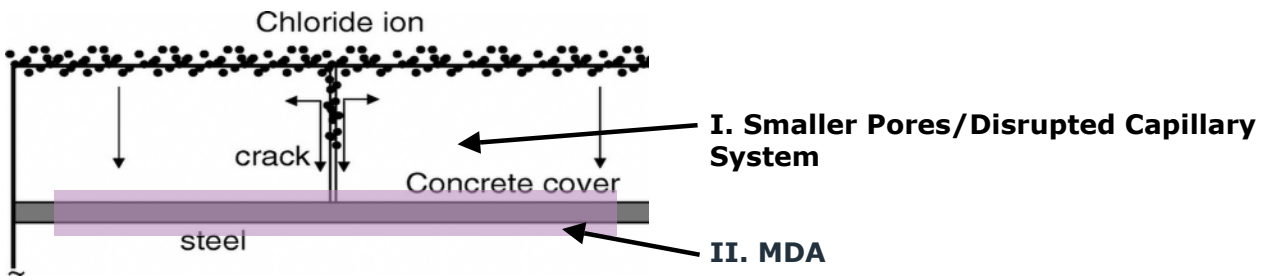
Vapor Lock 40/40 is a liquid admixture designed to provide a permanent capillary break that greatly reduces the permeability in concrete. A complex aqueous solution that reacts with the calcium hydroxide present from cement hydration and the extra mix water (not needed for hydration) creating relatively large amounts of additional c-s-h gel. This extra c-s-h disrupts the formation of a capillary system and provides for a slower, controlled "internal cure" that allows for greater and more thorough cement hydration. Vapor Lock 40/40 contains a second element (**M**aximum **D**ual **A**ction), a robust, migrating, electro-chemical film that encapsulates all ferrous material (i.e. rebar, p/t cables, etc.). It is clear in appearance and weights approximately 9.8 lbs./gallon.

Product Advantages

- Produces a concrete with an Ultra Low Permeability (warranted to be less than 0.174 US Perms) that does not allow for the movement of water or moisture/vapor through the concrete.
- By greatly reducing the egress/ingress of water and moisture, and thus ions and sulfates entering the matrix, Vapor Lock provides for a denser, more *Durable* restrained piece of concrete.
- Because of greater hydration and more developed cement particle structure with Vapor Lock, it produces concrete with significantly less Long-Term drying shrinkage, in either plain or restrained concrete. Slab curl and ASR is also greatly reduced.
- Can be classified as both a Waterproofing admixture/agent and Non-Accelerating Corrosion Inhibiting admixture.
- Vapor Lock is 'set neutral'; it does not accelerate nor retard the mix, and does not add harsh, reactive chemicals to the mix. Compressive strength is **not** lowered.

Product Uses

Vapor Lock 40/40 should be used whenever an Ultra Low Permeability concrete is required, when Long-Term Shrinkage is a concern and Corrosion Inhibiting properties are necessary. ***It is the only commercially available admixture that inhibits steel corrosion in concrete two ways; I. by delaying the Initiation Period (the start of corrosion) and II. the Propagation Period of corrosion continuing significant and debilitating damage.***



Vapor Lock™ 40/40

Product Uses, continued -

Vapor Lock 40/40 is effective in all structural concrete applications and is designed for substantial protection after "Post Crack" conditions. It is equally effective in horizontal slabs and vertical walls. In restrained concrete, reinforcement congestion is not an issue, as the protective film/coating is an electro-chemical process - it goes where the concrete goes. **Vapor Lock 40/40 enhanced concrete can be used in lieu of traditional waterproofing membranes and coatings, as a 'Belt-and-Suspender' approach when extra protection is needed, and in conjunction with the **E**lastomer **D**isruptive **S**ystem (EDS) in order to obtain the 15-Year Warranty and Insurance.**

The EDS is an extra component, and may be required in higher risk applications to obtain the 15-Year Warranty and Insurance package.

Finishability

The rheology of Vapor Lock enhanced concrete is increased with additional fines and an absence of bleed water (after screeding and floating). Most mixes experience about a ½ inch increase in slump and a noticeable increase in paste. This allows for a superior finish; either a rough broom or hard toweled finish with tighter surface tolerances.

Packaging & Handling

Vapor Lock is sold and supplied only through commercial ready mix producers and licensed pre-cast facilities. It is measured and added under the direction of only state licensed readymix weight masters. It comes in 275 & 330 gallons standard IBC totes and 55-gallon drums. It has a one year shelf life and should not be allowed to freeze.

Addition Rates & Dispensing

Vapor Lock is dosed based of off cementitious material - 10 ounces per hundred weight. *Both cement and supplemental materials (fly ash, slag, etc.) should be taken into account.* This dosage serves mixes 0.42 thru 0.52 w/cm ratios. Mixes outside of this range, will require modification. Vapor Lock should be added with the majority of head waters. Either portable dosing units or permanent, high-volume, automatic dosing systems wired directly into the batching panel are available.

Compatibility with Other Admixtures

Vapor Lock can be used with a full array of other types and other manufacturers of admixtures - with the exception of another Shrinkage Reducing Admixture. DELAMINATION WILL OCCUR. Other admixtures should be kept separate from Vapor Lock and added under their own directions. Vapor Lock can be used with air entrained mixes.

The Vapor Lock admixture shall be considered part of the total water in the mix design. The admixture shall be delivered as a ready-to-use liquid product and shall require no mixing at the batching plant or job site. In regards to actual mix performance, pre-testing is recommended. Please consult your SPG/Vapor Lock representative for guidance. Vapor Lock is a registered trademark of Specialty Products Group.

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Last updated; July. 2018