

Product Description:

Barrier One MVRA (“MVRA-CPS”) is a ready to use liquid concrete admixture that reduces the redistribution of concrete moisture, allowing interior adhered flooring applications to proceed without the setbacks of the redistribution of concrete moisture. MVRA-CPS eliminates the need for topical moisture mitigation systems, extended wait times for concrete moisture testing requirements, and provides an adhesion guarantee.

MVRA-CPS’s USA manufactured ingredients are integrally combined with existing elements of your mix design initiating capillary breaks within the concrete. These chemical reactions create abundant insoluble hydration products; permanently disrupting your concrete’s natural capillary / pore structures. These reactions eliminate the movement of critical level moisture vapor emissions into & out of the concrete.

MVRA-CPS has been extensively tested in both laboratory and field conditions. This admix has demonstrated increased early strength gains creating a denser concrete resulting in reduced slab curl. MVRA-CPS is independently certified to reduce shrinkage, ASR, & corrosion while demonstrating permeability results.

MVRA-CPS utilization allows for the direct application of primers, cementitious underlayments, sealers, and coatings to be installed on nonporous (power-troweled) slabs in as little as 7 days. Field moisture testing is not a MVRA-CPS warranty requirement. If conducted (since most flooring companies require) MVRA-CPS warrants up to 25lbs. per ASTM F1869 or 100% RH per ASTM F2170.

Technical Data:

Appearance: Almost Clear	Toxicity/ Vapors / Odors: None
Ph: 11.3	Specific gravity: 1.27
Shelf Life: One Year from delivery	Weight: 10.3 lbs./gal (net)
Flammability: None	Freeze Temp: 32°F
HPD: Available	VOCs: 0 g/l
Sodium Silicates: Yes	Chlorine Content Added: None
Capillary Break: Yes	NSF / ANSI 61 Compliant

Dispensing:

- Compatible with normal & light weight mix designs. Mix design(s) must be approved prior to first concrete placement.
- Compatible with well consolidated steel & composite fibers.
- Dosage: 12oz volume / 100 lb. total cementitious with 1:1 mix water replacement.
- Water to Cementitious ratio design ranges of 0.40 to 0.52
- MVRA-CPS should be dosed separately from other admixes & at the tail-end of the load. Adding MVRA-CPS with withheld tail water is recommended. **Do not allow MVRA-CPS to come in contact with dry cementitious materials.**
- For dosing accuracy & reporting, batch plant application is recommended. Allow a minimum of 7 minutes of rapid drum rotation before discharge.
- Do not let the MVRA-CPS material freeze at any point prior to application.

Concrete Performance:

- MVRA-CPS has no deleterious concrete effect & does not accelerate or retard mix set times per ASTM C494 testing. It facilitates finishing by reducing bleed-water, creating a creamier / richer undiluted paste.
- Water reducing admixes are acceptable to achieve slumps > +4”.
- MVRA-CPS has minimal impact on slump. (≤ 0.5” slump loss)
- Added shrinkage reduction admixtures (SRA) or crystalline product utilization are not recommended.
- 3” minimum slab depth for warranty consideration per ASTM 302.1R

Curing:

The Company concurs with ACI 302.2R-06 that any slab receiving moisture sensitive flooring; “shall be cured & covered with waterproof paper, plastic sheets, or a combination of the two for 3 to 7 days”. Although leaving the plastic down longer is acceptable; “PIA” dosed slabs only require 24 -48 hours of cure by this means & method. Curing compounds have no deleterious effect on “PIA” performance. However, if a curing compound is utilized, adhesive manufacturer guidelines regarding floor prep must be followed per ASTM F-710.

Specification Requirements:

The use of Barrier One MVRA-CPS admixture must be registered prior to any concrete placement for warranty consideration. All slabs on ground (SOG) require the use of an ASTM E 1745 vapor retarder. Installed per ASTM E 1643 and in direct contact with concrete per ASTM F710 & ACI 302.2R-06.

ASTM C-39	Type (1L Cement) (Average Strength Increase)	12%
ASTM D-5084	Hydraulic Conductivity of Saturated Porous Materials	<1.0 x 10⁻⁸
CRD C48-92	Standard Test Method for Water Permeability of Concrete	Pass
ASTM C-157	Drying Shrinkage (Average Reduction in Shrinkage) (37% Better Than "0.04" Standard)	37%
W/CM Ratio	Water To Cementitious Ratio Range	0.40 - 0.52
ASTM C-494	Type S Admixture	Pass
ASTM C-1543 & AASHTO T-259	Reduction in Corrosion (Ponding)	68%
ASTM C-672	Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals	No Scaling
ASTM G-109	Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments	No Notable Corrosion
ASTM C-1152	Acid Soluble Chloride in Mortar and Concrete	Pass
ASTM C-1260	Potential Alkali Reactivity of Aggregates (Mortar Bond Method) (Average Reduction in ASR Expansion %)	Pass
ASTM C-1567	Potential Alkali Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar Bond Method)	Pass
ACI 212.3R	Permeability Reducing Admix for Hydrostatic Conditions (PRAH)	Yes