

Product Data Sheet (information contained herein is as accurate as possible, however, the information posted on our website takes precedence to this publication).

Manufacturer:

Concrete Moisture Solutions, Inc. / Barrier One, Inc.
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Product Description:

CMS Admixture an Affiliated of Barrier One Inc., a moisture vapor reduction admixture developed by flooring, chemical and concrete experts to enable project teams to maintain demanding project schedules and to remain on budget. As an admixture, it is integral to the concrete, *not surface applied*, and its use will not interfere with the bonding of adhesives, resinous coatings or cementitious underlayments. In short...if it sticks to low porosity concrete, it sticks to CMS Admix dosed concrete!

CMS Admix, an Affiliated of Barrier One Inc., **and** is a very unique, VOC free formulation specifically designed to reduce overall slab permeability. It combines with pre-existing elements inside the mix and initiates a natural chemical reaction that disrupts the integral slab capillary system; which is the route of moisture vapor emission into and out of the concrete. This chemical reaction creates abundant C-S-H (calcium silicate hydrate) which forms a permanent barrier (capillary break) that is insoluble and irremovable.

Advantages:

By closing the capillary system, CMS Admix facilitates suspended moisture that is irremovable yet available for sustained cement particle hydration. Therefore, the use of CMS Admix results in concrete that is denser, stronger, with increased abrasion resistance, reduced slab warping, and significantly reduced shrinkage and permeability.

Technical Data:

Appearance: Colorless	Odor: None
Toxicity: None	Flammability: None
Ph: 11.3	Specific gravity: 1.304
Shelf Life: Indefinite	Weight: 10.3 lbs/gal (net)
Freeze Temp: 32°F	Storage Temp: above 36°F
Solvent: Water	Acid Resistance: Excellent
Hazardous Vapors: None	Installation: All concrete
Capillary Break: Calcium Silicate Hydrate	

Minimum slab thickness for use with CMS Admix is three (3") inches.

Dispensing:

- CMS Admixture must review ALL mix designs;
- CMS Admix is compatible with both normal and lightweight mix designs
- Dosage rate is 14oz per 100 lbs. of total cementitious materials; dose within plus or minus 3%
- CMS Admix is used in a one-for-one replacement of mix water
- Standard water-cementitious material ratio (w/cm) is 0.42 to 0.52; below or above may require adjustment by CMS Admixture*
- ***Additional dosage may be required based on approved mix**
- For accuracy and reporting, CMS Admix recommends dosing at the batch plant; however, dosing onsite is of course acceptable; if this is done, let drum rotate for 7 minutes before discharge
- CMS Admix should be added separately from other admixes at the tail-end of the load.

Concrete Performance:

- CMS Admix is not an accelerator or a retarder
- It has little to no impact on set times per ASTM C494 testing
- It has minimal impact on slump (not more than 0.5" loss)
- May be used with all other admixtures provided that such admixtures are added separately and the combination has no deleterious effect on the concrete. with the exception of shrink reducing admixes (SRA) and crystalline growth admixes.
- Use of water reducing admixes is recommended to achieve slumps greater than 4"
- With CMS Admix there is reduced bleed water, creating a richer, creamier, undiluted paste and therefore facilitating finishing operations

Curing:

For slabs to receive moisture sensitive flooring CMS Admixture concurs with the recommendation of ACI 302.2R-06, p. 38; "such slabs should be cured by being covered with waterproof paper, plastic sheets, or a combination of the two for 3 to 7 days". However, a CMS Admix dosed slab requires only 24 hours of curing by this method (leaving the plastic/waterproof paper down longer though is CERTAINLY acceptable). Curing compounds have no deleterious effects on the performance of CMS Admix. **However**, if a curing compound is used and that slab is to be covered, the manufacturer's guidelines of that material must be followed.

Additional Requirements:

A representative or agent of Concrete Moisture Solutions, Inc. must be present at the jobsite during placement of all CMS Admix treated concrete. Do not proceed without this representative being present.

An Agent Of CMS Admixture Shall, In Most Instances, Be An Independent Concrete Inspection Company. This Inspection Company Will Provide CMS Admixture With Cylinders From Every Placement Of CMS Admix Dosed Concrete For Hydraulic Conductivity/Coefficient of Permeability Testing. These Tests are for CMS Admixture's Internal Quality Control and Warranty Purposes.

For all slabs on ground, the use of an ASTM E 1745 vapor retarder, installed following ASTM E 1643 and ASTM F 710 guidelines is required; not required for suspended concrete slabs.

***Warranty:**

CMS Admix is formulated to eliminate the route of moisture vapor emission through concrete **and warrants up to 25 pounds of moisture per ASTM F1869 or 100% RH per ASTM F2170.** Our admixture...our process...carries an available manufacturer's warranty for the life of the concrete* against moisture vapor emission flooring failures, including removal of failed flooring, topical remediation of failed area and all finish floor materials and labor like the original for the affected area(s).

A project specific bond adhesion warranty to match the adhesive manufacturer's warranty is also available.

**A "life of the concrete" moisture related flooring failure warranty and/or bond adhesion warranty, complete with a comprehensive concrete testing protocol, must be required in Section 2 of the project 03 Division specifications or addendum in order for Barrier One to convey its "life of the concrete" warranty.*

Technical Services:

For technical assistance, contact your CMS Admixture Regional Manager. Or contact us directly at - P: 877.224.5850; F: 866.594.3490

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