

Product Data Sheet

CPS ADMIX

Moisture Vapor Reduction Admixture (MVRA)

Description

CPS ADMIX is a non-toxic elevated performance liquid admixture; specifically formulated to generate additional hydration products within your mix design while efficiently creating a capillary / integral block within the concrete to shut down moisture vapor movement to within “critical levels”. This chemical reaction forms an insoluble / irremovable and permanent capillary break. VOC Free; CPS ADMIX does not promote nor contribute to corrosion of embedded reinforcement through the use of chloride based materials

Use

CPS ADMIX is applicable / appropriate for use in both normal and light weight concrete across a wide spectrum of mix designs to produce low permeability concrete. Typical benefits / uses of CPS ADMIX include but are not limited to:

- Slabs receiving moisture sensitive flooring and structural concrete roof decks ○ w/cm from 0.41 to 0.53
- Elevator pits and retaining wall ○ w/cm from 0.41 to 0.53
- Water retaining structures such as swimming pools & cisterns
○ w/cm from 0.41 to 0.53
- Tunnels and other underground structures
- Civil engineering projects of any magnitude (ie; secant piles, roadways, dams, bridges)

CPS ADMIX has the above w/cm range limitations. CPS ADMIX would be happy to participate in your testing of the desired project mix to determine if CPS ADMIX can achieve the desired concrete properties.

Benefits

CPS ADMIX is sourced and manufactured under some of the most statistically relevant and exacting supply production processes available at the most up-to-date and modern chemically green facilities in North America. These results consistently demonstrate a higher specific product gravity without the need to deionize water and base materials. CPS ADMIX is completely compatible with all floor coverings, coatings, roofing membranes and adhesives for non-porous substrates found in a majority of projects. CPS ADMIX continues to offer the most cost effective approach to mitigate your moisture vapor emission (MVE) liability.

- ASTM D5084 – indicates reduced coefficient of permeability
 - Permits flooring to be installed in as little as 7 days after concrete placement
 - Protects concrete finish from moisture vapor emission failure from the concrete
 - Protects against alkali and efflorescence attack from the concrete ○ *Warranty can convey upon receipt of concrete batch ticket*
- ASTM C1260 – indicates improved resistance to alkali silica reactivity
 - On average 10% reduction* of effects of ASR compared to a sample of concrete not dosed with CPS ADMIX
- ASTM C157 – indicates less shrinkage
 - Reduces slab warp, plastic shrinkage cracking and crazing
- ASTM C39/39M – indicates early strength gain
 - Achieves desired strength weeks before the specified 28 days
- ASTM C494 – indicates compliance with physical requirements of Type S admixture in hardened concrete

Packaging

CPS Admix is available in the following quantities:

- 55 gallon drums (208.2 liters)
- 275 gallon totes (1040.99 liters)
- 330 gallon totes (1249.19 liters)
- Bulk delivery available upon request (volume dependent)

Dosage

For normal and lightweight mix designs between 0.41 and 0.53 w/cm:

- 12 ounces (355 ml) per 100 pounds (45.36 kg) of total cementitious material
- Replace mix water on a one-for-one basis with the CPS ADMIX in an amount equal to the reviewed and appropriate yd³ CPS ADMIX dosed amount based upon total cementitious.

Consult directly with manufacturer on all mix designs outside this published range.

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Mixing

CPS ADMIX can be added at the batch plant or at the project site. For best results, Dose CPS ADMIX directly to freshly mixed concrete at the end of the batch process

- Mix thoroughly to insure uniform distribution of CPS ADMIX throughout the mix.
- Rapid drum rotation for a minimum of seven (7) minutes is recommended
- Compatible with fly ash and granulated ground blast furnace slag
- Compatible with all other chemical admixtures with the exception of crystalline growth products and other SRAs
- Use of steel or mesh fibers can compromise moisture vapor protection of installed flooring but are completely compatible CPS ADMIX dosed concrete

Placement

CPS ADMIX has little to no impact on concrete set times when compared to equivalent mix designs without the CPS ADMIX admixture as placed in comparable conditions.

- Use of surface applied evaporation retarders as necessary for ambient conditions does not negatively impact the CPS ADMIX dosed concrete.
- Any ACI accepted method for curing concrete is completely acceptable for curing concrete with CPS ADMIX. Due to the internal curing properties of the CPS ADMIX the curing time with moisture retaining covers can usually be reduced by half, depending on ambient conditions.
- NOTE: Slabs to receive moisture sensitive flooring should only be cured with plastic sheets, waterproof paper, or self-dissipating curing compounds per ACI guidelines.
- For slabs on ground, it is a requirement of the flooring industry that all such slabs be constructed in direct contact with an ASTM E1745 compliant vapor retarder installed per ASTM E1643, ACI 302.2R and in accordance with ASTM F710.

Storage

Store CPS ADMIX above 36° Fahrenheit (2.2° Celsius) and never allow to freeze. Should product freeze, return to manufacturer for reincorporation at purchaser's shipping expense. Do not store in direct sunlight for long periods nor in unopened containers. CPS ADMIX is a water-based admixture and significant evaporation could occur if not protected from excessive heat or sunlight. CPS ADMIX has a one-year shelf-life if stored properly in original, unopened packaging material.

However, it is recommended that all product be used within nine months of purchase for best results.

Technical Data

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| • Physical state | – liquid |
| • Odor | – odorless |
| • Color | – hazy clear liquid |
| • Specific gravity | – 1.304 |
| • pH (fluid) | – 11.3 |
| • volatile organic compounds (VOCs) | – 0 g/l |

CPS ADMIXTURE warrants that its CPS ADMIX (“product”), will reduce the permeability of structural concrete with mix designs between 0.41 and 0.53 water to a total cementitious material ratio to not exceed an in-place permeability performance of 6.0×10^{-8} cm/s per ASTM D5084 **during the concrete's lifetime**; exclusive of any cracking regardless of cause. CPS Admixture warrants its CPS ADMIX product to be free from manufacturing defects and to meet the technical properties of the current Technical Data Sheet if used as directed within shelf life and never allowed to freeze. The user of the CPS Admixture product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s). This is only a short version of the CPS ADMIX warranty. Full warranty information available online.