HydroMax® HP

Technical Data Sheet

Internal Curing Admixture
ASTM C494/C494M Type S

DESCRIPTION

HydroMax® High Performance (HP) is an engineered, SAP-based internal curing admixture that absorbs and releases water within concrete to support continued cement hydration. By making curing water available as internal moisture is consumed, HydroMax® helps reduce self-desiccation, autogenous shrinkage, and the potential for early-age cracking.

APPLICATIONS

- Low w/cm concrete
- High-performance concrete
- Bridge decks, pavements, and parking structures
- Slabs, floors, and other large exposed surfaces
- Ready-mixed and precast concrete
- Concrete containing SCMs
- Concrete placed in hot, dry, or windy conditions
- Concrete exposed to freezing and thawing

ADVANTAGES

Depending on concrete mixture proportions, materials, placement, and surface curing practices, HydroMax® may help:[1]

- Reduce self-desiccation and autogenous shrinkage
- Reduce potential for early-age cracking
- Continue hydration and strength development
- Improve durability and resistance to surface scaling
- Improve freeze-thaw resistance
- Reduce permeability and improve resistance to moisture ingress

TYPICAL SPECIFICATION CLAUSE

"Concrete shall be internally cured with HydroMax® High Performance Internal Curing Admixture manufactured by ProCure. Material to be used in strict accordance with manufacturer's instructions."

COMPATIBILITY

HydroMax® does not contain calcium chloride or other chloride-based ingredients and may be used in combination with other non-chloride admixtures or admixture systems. HydroMax® will neither initiate nor promote corrosion of reinforcing steel in concrete. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mix.

AEA DOSAGE FOR AIR-ENTRAINED MIXTURES

At the recommended dosage, HydroMax® typically contributes approximately 2–4 percentage points to the measured air-void content of hardened concrete. Account for this contribution when selecting the air-entraining admixture (AEA) dosage. Establish the appropriate combined HydroMax® and AEA dosages through trial batches and hardened air-void testing to meet project requirements.

DOSAGE

HydroMax® HP admixture is recommended for use at a dosage of 0.15%–0.20% by weight of total cementitious materials. This range is suitable for most concrete mixtures made with typical materials and under typical conditions. Dosage outside this range may be appropriate depending on the mixture materials and job conditions.[2] Confirm the dosage through trial batches or consult your HydroMax® representative.

GUIDELINES FOR USE[3]

Bulk material — super sacks: Use a calibrated bulk dispensing system to weigh and introduce the required quantity of HydroMax® during batching. Follow the plant's validated batching sequence and mix thoroughly after addition to promote uniform distribution before discharge.

Bagged material — 4.5 lb bags: After all other materials have been loaded, bring the concrete to the top of the drum. Add HydroMax directly onto the fresh concrete at the slump rack. Rinse the drum in the normal manner after addition. Mix for 5 minutes before discharge.

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STANDARDS

HydroMax® HP meets the requirements of ASTM C494/C494M Type S.[4]

STORAGE & SHELF LIFE

Store between 41°F (5°C) and 95°F (35°C) in unopened original containers. Protect from direct sunlight and freezing. Shelf life is at least one (1) year.

PACKAGING

- 4.5 lb (2 kg) bags
- 2,000 lb (907 kg) super sacks

TYPICAL PROPERTIES

Color:	Cream to yellow
Physical state:	Solid (dustless powder)
pH (in water):	10.5–12.7
Bulk density:	0.7 g/mL

NOTES

[1]Benefits depend on mixture proportions, materials, placement, and curing. Freeze-thaw and scaling resistance require an appropriate air-void system. HydroMax® provides internal curing and does not replace surface curing.

[2]Dosages outside the recommended range may be appropriate when supported by testing with the proposed mixture and materials.

[3]Verify batching sequence, mixing time, and uniform distribution through plant trials.

[4]For ASTM C494/C494M Type S testing, air contents in the reference and test mixtures were adjusted to equivalent levels.

WARRANTY

ProCure, a division of Advanced Chemical Technology, LLC (ProCure) warrants that HydroMax® HP is free from manufacturing defects and conforms to its published product specifications. Because conditions of use, such as site conditions, workmanship, concrete ingredients, weather, structural issues, and other factors are beyond the control of ProCure, no warranty can be given as to the results of use. The Purchaser is responsible for consulting qualified professionals and determining the suitability of the product for its intended application. Purchaser's sole remedy is limited to replacement of any product proven defective or, at ProCure's option, refund of the purchase price paid. THIS LIMITED WARRANTY CONTAINS THE ENTIRE OBLIGATION OF PROCURE. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. PROCURE SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. No representative of ProCure is authorized to modify or extend this limited warranty except through a written agreement authorized by ProCure. ProCure reserves the right to revise its product specifications and technical literature. Product supplied shall conform to the applicable specifications in effect at the time of sale.

PROCURE
WE STAND FOR CURING

ENGINEER THE CONCRETE
ENGINEER THE CURE™

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