



MASTER[®]
» BUILDERS
SOLUTIONS

— Research and Development

MasterLife[®] 300 Series Crystalline
Capillary Waterproofing Admixtures

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MasterLife® 300 Series Crystalline Capillary Waterproofing Admixtures

For more than 100 years, Master Builders Solutions has had a culture of innovation focused on improving concrete and concrete admixtures. Concrete research has included experimentation in the zero-gravity conditions of outer space and the ocean floor in the highest tidal zone on planet Earth. Evaluating concrete in the harshest of environments pushes the envelope of concrete performance and provides a complementary research approach to the more traditional methods Master Builders Solutions regularly carries out in the world's largest, private concrete laboratory located in Beachwood, OH. The result is decades of innovation related to concrete rheology, the crystalline structure of the concrete matrix, and other bulk plastic and hardened properites of concrete.



Testing in Harsh Environments

Water transport through plastic and hardened concrete was evaluated in the highest tidal zone in the world – Bay of Fundy – Treat Island, Eastport, ME.



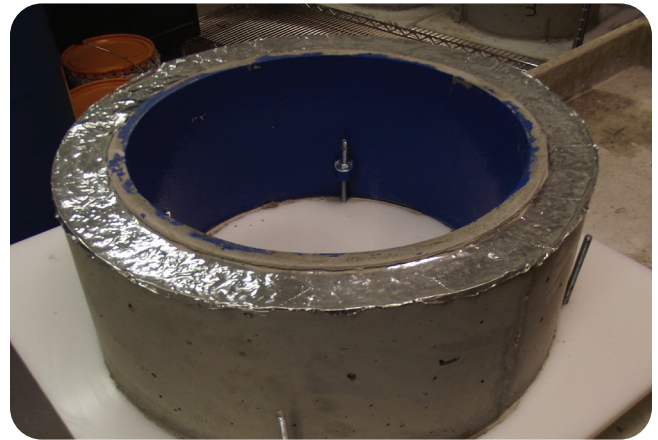
Testing in Space

Etringite crystals and calcium hydroxide platelet images from concrete research in zero gravity was done aboard the space shuttle Endeavour – Mission STS 68.

MasterLife 300 Series

Crystalline capillary waterproofing admixtures were developed by the same team of world-leading concrete admixture scientists from Master Builders Solutions that have delivered other game-changing innovations and industry firsts.

Twenty two different laboratories in the Beachwood, OH, facility allow for continuous testing and development of innovative technologies.



Testing Capabilities Related to Water Transport Through Concrete

- water penetration (pressure method)
- rapid chloride permeability
- chloride diffusion
- freezing and thawing (bulk and surface)
- alkali silica reactivity
- sulfate resistance
- drying shrinkage
- crack resistance
- anti-washout

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