



## Key Performance Advantages

- Maximizes paint performance and minimizes costs
- Improves water sensitivity performance
- Exempt from regulation as a VOC by U.S. EPA and Environment Canada



Paints and Coatings

# AMP-95™

## Reformulating Latex Paints for Early Water Resistance

AMP-95™ is widely recognized as a multifunctional additive for all types of latex paints. The true benefits of AMP-95 are realized through optimization of other additives to maximize paint performance and minimize costs. When formulating a latex paint, it is important to consider the effects that AMP-95 and other raw materials have on paint performance, and in particular, early water resistance.

Water sensitivity performance is a requirement that paints must meet if they will be subjected to moisture shortly after application. If the paint film has sufficient levels of slow releasing materials evaporating from the partially cured finish, this film will be susceptible to moisture transmission at the surface. This moisture will typically cause blistering, loss of adhesion or surface staining.

There are a number of raw materials which cause a paint film to “through-dry” at a slower rate. These materials include surfactants, defoamers, amines, coalescing solvents and wet-edge agents (glycols). Because every formulation is a balance of properties, those materials, which contribute to the water sensitivity performance, must be balanced with the incorporation of AMP-95. Achieving the full benefit from AMP-95, without affecting water sensitivity, will require some simple reformulation:

### **Incorporate AMP-95 in the grind (at 0.15% on total formulation):**

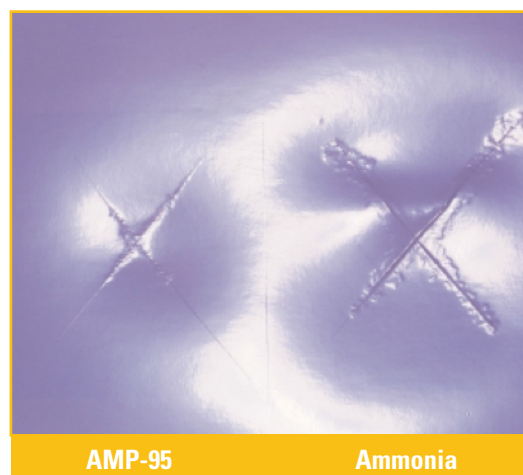
- Reduce dispersant by 25% (active basis)
- Reduce wetting agents by 25%
- Reduce glycols by 10%

Using these guidelines, while eliminating ammonia from the formulation, will ensure that you have taken full advantage of the multifunctionality of AMP-95 while balancing the water resistance performance.

## Improved Water Sensitivity Performance

The latex paint formulation shown below was tested for water sensitivity performance. As can be noted, the formulation tips were applied when incorporating AMP-95 into the formulation. As evident in the photograph of the corresponding coating films, the paint optimized with AMP-95 has superior water resistance.

Semi-Gloss Paint		
	With AMP-95	With Ammonia
<b>Materials</b>	<b>Parts By Weight</b>	
Water	12.0	12.0
Propylene glycol	58.0	65.0
Anionic dispersant	4.0	5.8
AMP-95	2.0	--
Defoamer	1.0	1.0
Biocide	1.7	1.7
Titanium dioxide	268.0	268.0
Water	88.0	88.0
Acrylic latex	494.0	494.0
Coalescing agent	17.5	19.5
Nonionic surfactant	2.1	2.5
Defoamer	1.0	1.0
Associative thickener	39.5	39.5
Ammonia	--	1.0
Water	66.7	77.5
	<b>1066.3</b>	<b>1066.3</b>



AMP-95

Ammonia

## Product Stewardship

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angus.com	Latin America +55-11-4700-8427	Central and Eastern Europe +33 (0) 1 34 23 31 60	Indian Subcontinent +000-800-440-5098	Japan and Korea +81-34-477-4961 +82-2-3483-6665	
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