

EASTMAN

Eastman **SOLUS™** 2300
performance additive

**Improved
performance in
industrial coatings**





Eastman SOLUS™ 2300

performance additive

Faster dry and optimized performance on contaminated surfaces

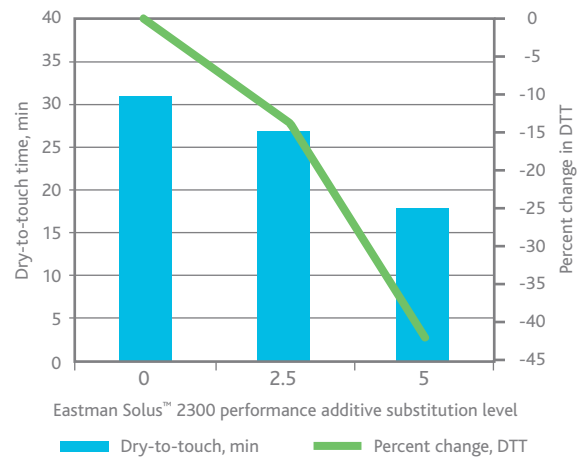
When formulating high-solids industrial coatings, it is often difficult to achieve both optimal performance and improved productivity. By minimizing defects on contaminated surfaces and enabling faster dry, Eastman Solus™ 2300 performance additive enables formulators to optimize both performance and productivity.

Dry-to-touch time (DTT)

Eastman evaluated a series of coatings by replacing a portion of acrylic resin solids with an equivalent amount of Eastman Solus™ 2300 performance additive and recorded DTT times after spray application. Figure 1 illustrates that the DTT time can be reduced in excess of 40% with a 5% substitution of Solus 2300 for the acrylic polyol. Figure 2 illustrates that the improved drying characteristics of the coating were accompanied by an early increase of the system's T_g by 5°C compared to the control within the first 24 hours of curing. The T_g of the control and the 5% Solus 2300 coating then equilibrates after 7 days of room-temperature cure. This initial increase in T_g results in better early performance without compromising long-term cure properties.

Figure 1

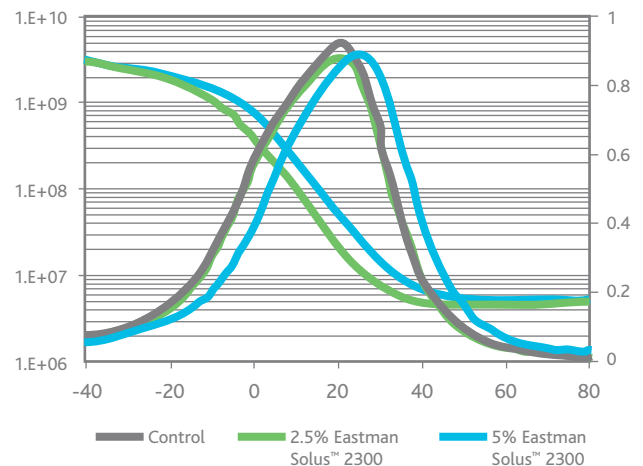
Effect of Eastman Solus™ 2300 performance additive on dry time



Acrylic resin replaced by Eastman Solus™ 2300 performance additive at 2.5 and 5% solids

Figure 2

Early T_g increase with a substitute for Eastman Solus™ 2300 performance additive



Optimized performance on contaminated surfaces

Defects resulting from surface contaminants can be costly in both time and material. As a multifunctional additive, Eastman Solus™ 2300 performance additive optimizes coatings performance on contaminated surfaces, resulting in a reduction of rework and cost.

Using the same test paints as the dry time studies, panels contaminated with a common lubricant were spray coated to yield a dry film thickness of 45-50 microns. The effectiveness of Eastman Solus™ 2300 performance additive in reducing defects over the contaminated surface can clearly be seen in Figure 3.

Figure 3
Improved coverage on contaminated surfaces



Paint with 5% Eastman Solus™ 2300 performance additive

Control paint

Test formulation

Grind	Supplier	Control	2.5% Eastman Solus™ 2300	5% Eastman Solus™ 2300 performance
Part A				
Setalux 1903 BA-75	Nuplex Resins	20.9	20.9	21.0
Disperbyk 110	Byk-Chemie	0.6	0.6	0.6
Ti-Pure R-902	DuPont	31.1	31.2	31.3
Solvent blend		1.5	1.5	1.5
Grind to a 7 Hegman				
Letdown				
Setalux 1903 BA-75	Nuplex Resins	20.5	19.5	18.5
Dabco T-12 (5% in PM acetate)	Air Products	0.1	0.1	0.1
Eastman Solus™ 2300 (50% in solvent blend)	Eastman Chemical Company	0.0	1.6	3.1
Disparlon OX-60	King Industries Specialty Chemicals	0.7	0.7	0.7
BYK 306	Byk-Chemie	0.1	0.1	0.1
Solvent blend		5.9	5.4	4.9
Part B				
Desmodour N 3390 (5% xs)	Bayer Material Science	18.6	18.4	18.2
Total — Part A & B		100.0	100.0	100.0

Solvent blend: n-butyl acetate 45%, MAK 35%, MEK 15%, EB acetate 5%

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**For more information on
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performance additive, visit
www.Eastman.com/Solus.**

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