

Eastman Solus™ 2100 performance additive

Weathering update — 31 month exposure

Eastman Solus™ 2100 performance additive, the first product in the family of Eastman Solus performance additives for compliant coatings, has now passed 31 months weathering durability exposure in Florida. Derived from natural and renewable cellulose material, Solus 2100 is designed for today's high-solids topcoat systems featuring improved productivity from reduced dry-to-touch times and extended polishing window while maintaining the excellent sag behavior for which the traditional Eastman™ cellulose esters are known.

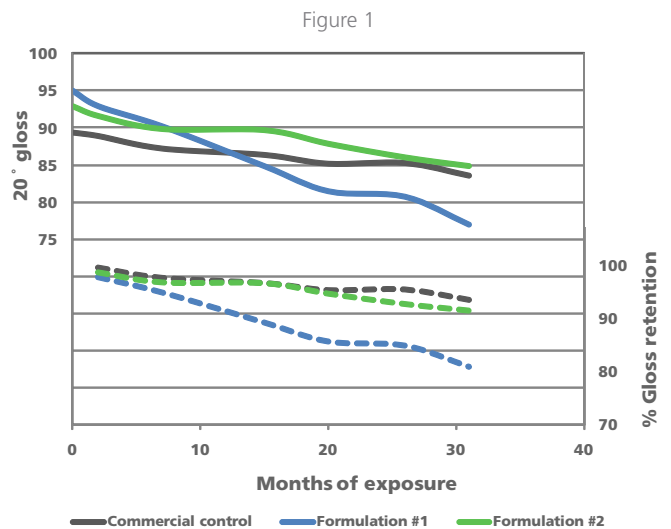
Two generic topcoat formulations, found in Table 1, were prepared where Eastman Solus™ 2100 performance additive was substituted for ten weight % of the polyol resin. In the generic formulations containing Solus 2100, Formulation #1 contains a blend of acrylic resins, whereas Formulation #2 contains only one of the polyol resins. The coatings were applied over e-coated cold-roll steel panels coated with a commercially available sealer and basecoat.

Table 1

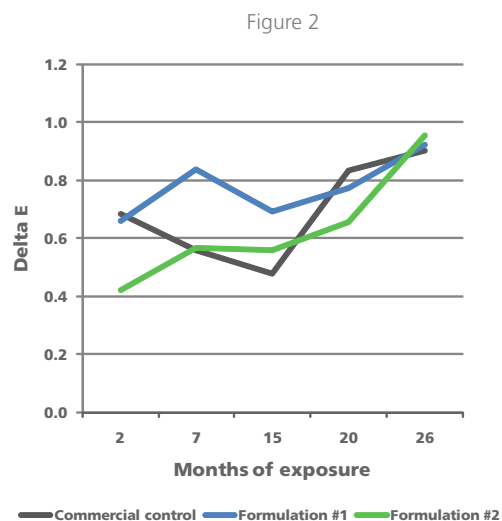
Generic test formulations			
Material	Supplier	Eastman Solus™ 2100 — Formulation #1 Wt %	Eastman Solus™ 2100 — Formulation #2 Wt %
Setalux 1903 BA-75	Nuplex Resins	16.2	54.0
Macrynal 515 / 70 BAC	Cytec Industries	40.5	-
Eastman Solus™ 2100 performance additive (50% in solvent blend ^a)	Eastman Chemical Company	9.0	9.0
Irganox 1010 (10% solids)	BASF	1.0	1.0
DBTDL (10% solids)		0.5	0.5
Tinuvin 1130 (10% solids)	BASF	4.5	4.5
Tinuvin 123 (10% solids)	BASF	6.8	6.8
BYK-331	Byk-Chemie	1.0	1.0
Solvent blend ^a		-	0.9
Tolonate HDT-LV (100%)	Perstorp Group	22.3	22.3
Reduced to 18 sec Ford cup #4			
Solvent blend ^a		8.8	8.8
% Solids		67%	67%

^aSolvent blend = n-butyl acetate 45, MAK 35, MEK 15

Figure 1 depicts the 20° gloss and % gloss retention after 31 months of Florida exposure. The performance of Formulation #2 is very similar to that of a readily available commercial clearcoat.



The changes in Delta E over the first 26 months were reasonably equivalent as shown in Figure 2.



The Eastman Solus™ family of performance additives provides the same UV resistance commonly found in traditional Eastman™ cellulose ester products.



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