EASTMAN

Eastman **ADVANTEX**™
neutralizing amine additive

Create more efficient formulations with Advantex™

Eastman Advantex multifunctional neutralizing amine enables a variety of benefits to architectural coatings, including superb pigment dispersion, excellent emulsion stability, and outstanding syneresis control.

Internal tests show that formulating with Advantex allows for the development of lower odor, lower-VOC paints that can contain up to 75% less propylene glycol, 50% less surfactant, 40% less de-foamer and up to half as much dispersant than a comparable formulation with ammonia.

By formulating with Advantex instead of ammonia, you may see significant cost savings. Internal testing shows that choosing Advantex over ammonia may:

- Reduce antifreeze by up to 70%
- Reduce surfactant usage by up to 50%
- Reduce defoamer use by 50%
- Reduce pigment and / or dispersant usage

Formulation comparison using Advantex and ammonia

Table 1								
Quantities in pounds /100 gallons	**#1 Advantex** (Control)	**#2 Advantex** (PG level halved)	**#3 Advantex** (No PG)	**#4 Ammonia** (Control)	**#5 Ammonia** (PG halved)	**#6 Ammonia** (no PG)	**#7 Advantex** (50% less dispersant, 50% less surfactant, 50% less defoamer)	**#8 Advantex** (50% less dispersant, 50% less surfactant, 50% less defoamer, 50% less PG compared to Advantex control)
Water	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Tamol 731A	7.5	7.5	7.5	7.5	7.5	7.5	3.8	3.8
BYK 348	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5
Tego Foamex 810	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Kathon LX 1.5%	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Propylene glycol	12.9	6.5	0	30.1	15.1	0	12.9	6.5
Tioxide TR 93	225.0	225.0	225.0	225.0	225.0	225.0	225.0	225.0
Grind								
Water	101.9	101.9	101.9	101.9	101.9	101.9	126.5	126.5
Rhoplex VSR 2015	524.2	524.2	524.2	524.2	524.2	524.2	524.2	524.2
Advantex	3.5	3.5	3.5	—	—	—	3.5	3.5
Ammonia, 28%	—	—	—	6.0	6.0	6.0	—	—
BYK 348	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5
Tego Foamex 810	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0
RM 2020NPR	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5
RM 8W	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0
Water	19.2	25.7	31.7	—	15.1	29.2	—	6.5
Total:	**1033.8**	**1033.9**	**1033.4**	**1033.3**	**1033.4**	**1032.4**	**1032.5**	**1032.6**

Performance results

Various attributes were measured and tested for the formulations above. The more efficient formulas are possible because higher MW and more functional neutralizing additives like Advantex™ favorably modify the physical properties of the system.

As the results in Table 2 demonstrate, formulation #8 with Advantex allows for the development of a lower odor, lower VOC paint that contains 75% less propylene glycol 50% less surfactant, 40% less defoamer and half as much dispersant than formulation #4, a comparable ammonia-based paint.

Table 2

Quantities in pounds / 100 gallons	#1 Advantex (Control)	#2 Advantex (50% less PG)	#3 Advantex (zero PG)	#4 Ammonia (28%) (Control)	#5 Ammonia (28%) (50% less PG)	#6 Ammonia (28%) (zero PG)	#7 Advantex (reduced levels of surfactant, defoamer, dispersant vs. Advantex control)	#8 Advantex (reduced levels of PG, surfactant, defoamer, dispersant vs. Advantex control)
Amine level	3.5	3.5	3.5	6.0	6.0	6.0	3.5	3.5
Propylene glycol	12.9	6.5	0.0	30.1	15.1	0.0	12.9	6.5
Surfactant	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0
Defoamer	2.5	2.5	2.5	2.5	2.5	2.5	1.5	1.5
Dispersant	7.5	7.5	7.5	7.5	7.5	7.5	3.8	3.8
Viscosity, KU	94	94	94	96	98	101	103	103
Viscosity, ICI	0.9	0.9	0.8	0.9	0.9	0.8	0.9	0.9
F/T, 3 cycles – final viscosity KU	102	104	Fail – 3rd	108	Fail – 1st	Fail – 1st	112	114
Viscosity difference	8	10	—	12	—	—	9	11
Leveling ASTM D4062	10	10	10	10	—	10	10	10
Low temperature film formation, 6 mils 40˚F								
Sealed	10	10	10	10	—	10	10	10
Unsealed	10	10	10	10	—	10	10	10

Note: the ammonia-based formula is optimized so as to have the lowest level of all the additives.

To learn more about Advantex, visit
www.eastman.com

EASTMAN

The results of **insight**™

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ADD-COAT-036 02/16