

Eastman **ADVANTEX™**
neutralizing amine additive

Eastman **VANTEX™-T**
neutralizing amine additive

Neutralizing amines. Enhancing paint performance.

Eastman is committed to delivering innovation and solutions for coatings applications. For more than 90 years, we have been a leading provider of high quality raw materials for the global paint and coatings industry.

Our comprehensive portfolio for the coatings industry includes neutralizing amine products. Paint formulators use neutralizing amine additives to adjust the pH of the paint. In addition, these additives function as beneficial supplementary pigment dispersants that enhance tint strength, grind stability, and overall paint performance.

Eastman Advantex™ neutralizing amine additive

Eastman Advantex is a multifunctional and cost-effective neutralizing amine that enables a variety of benefits to architectural coatings. Advantex improves the low-odor profile of architectural coatings while also enhancing performance through superb pigment dispersion, emulsion stability, and syneresis control.

Eastman Vantex™-T neutralizing amine additive

Eastman Vantex-T is an excellent multifunctional neutralizing amine that enables formulators to create environmentally friendly, lower odor, low-VOC paints and coatings.

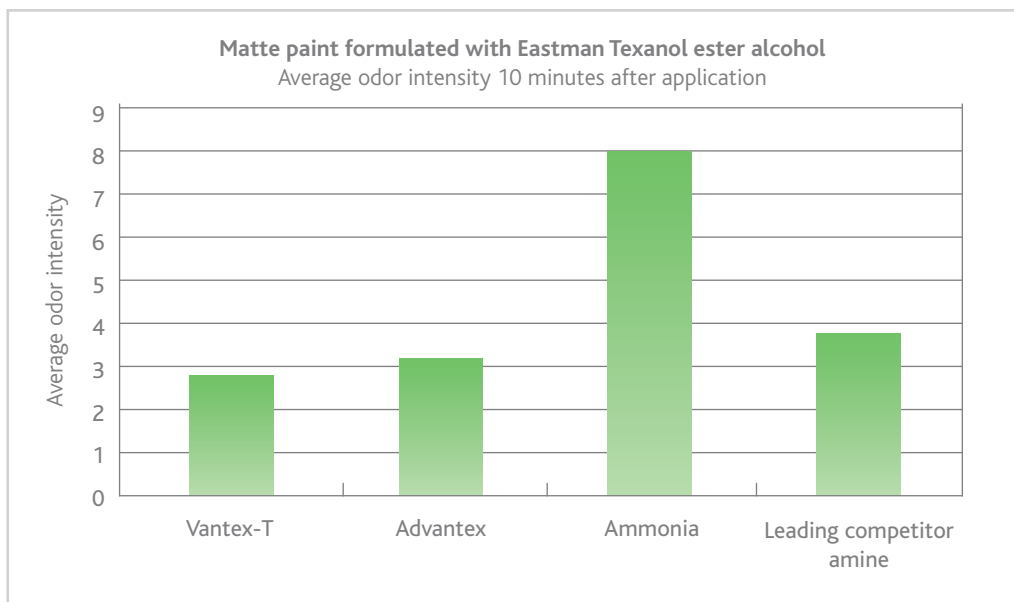
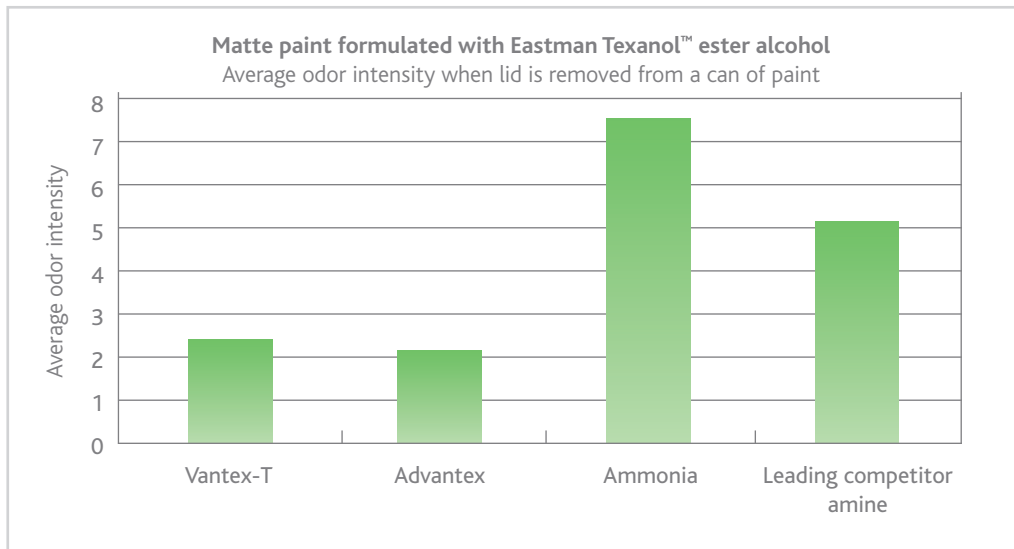
Vantex-T is a tertiary amine additive with virtually no ammonia or amine-type odor. The lack of odor from Vantex-T is a benefit in formulating paints for interior use. Coatings formulated with Vantex-T are suitable for use in contained spaces and in areas that may be occupied after painting. Vantex-T can be used in formulations that meet AgBB, Ecolabel, and Greenguard Standards. Contact your Eastman representative for more information.

As volatile neutralizing amines have become one of the few odorous components still used in paints, low-VOC paints can achieve improved performance with less odor by using low-odor, neutralizing additives like Vantex-T.

VOC contribution is dependent on region and test method. In the U.S., testing by EPA Method 24 shows that Vantex-T does not contribute to the VOC content. However, ASTM D6886 with methyl palmitate as the GC marker shows that it is a VOC. Vantex-T is not considered a VOC in accordance with the ISO 11890-2:2013 (based on VOC definition as described in EU directive 2004/42/EC and ABNT NBR-16388).

Odor testing

An Eastman team of scientists tested several commercially available neutralizing amines. In-can odor and application odor were tested.



Conclusion

- In paint systems, Advantex and Vantex-T show the lowest odor among the neutralizers that were evaluated. Ammonia has the strongest odor in all paint systems.
- Neat odor:
The neat odor of Advantex and Vantex-T is significantly lower than the leading competitor amine product. It was not considered safe practice to evaluate the neat odor of ammonia in this test.
- In-can and application odor:
Advantex and Vantex-T show significantly lower in-can and initial application odor compared to the leading competitor amine product and ammonia.

Zero VOC emission testing (Vantex-T based paint)

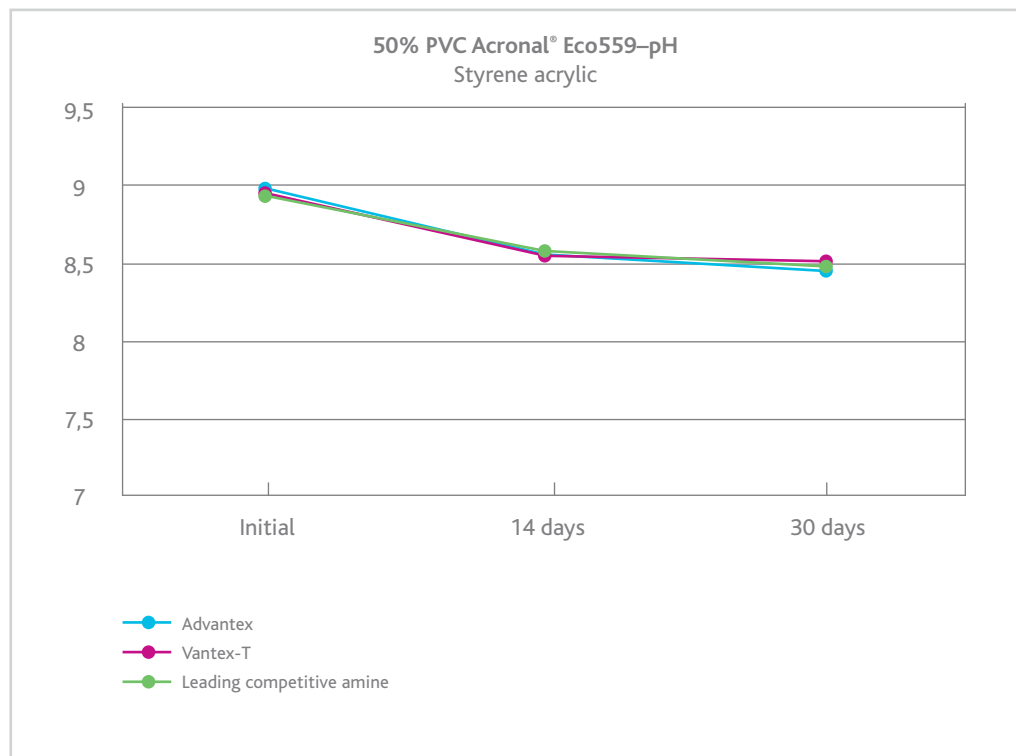
Test paints formulated with Vantex-T were submitted to an independent, accredited test laboratory for emission testing. No emissions from Vantex-T were detected during the test period.

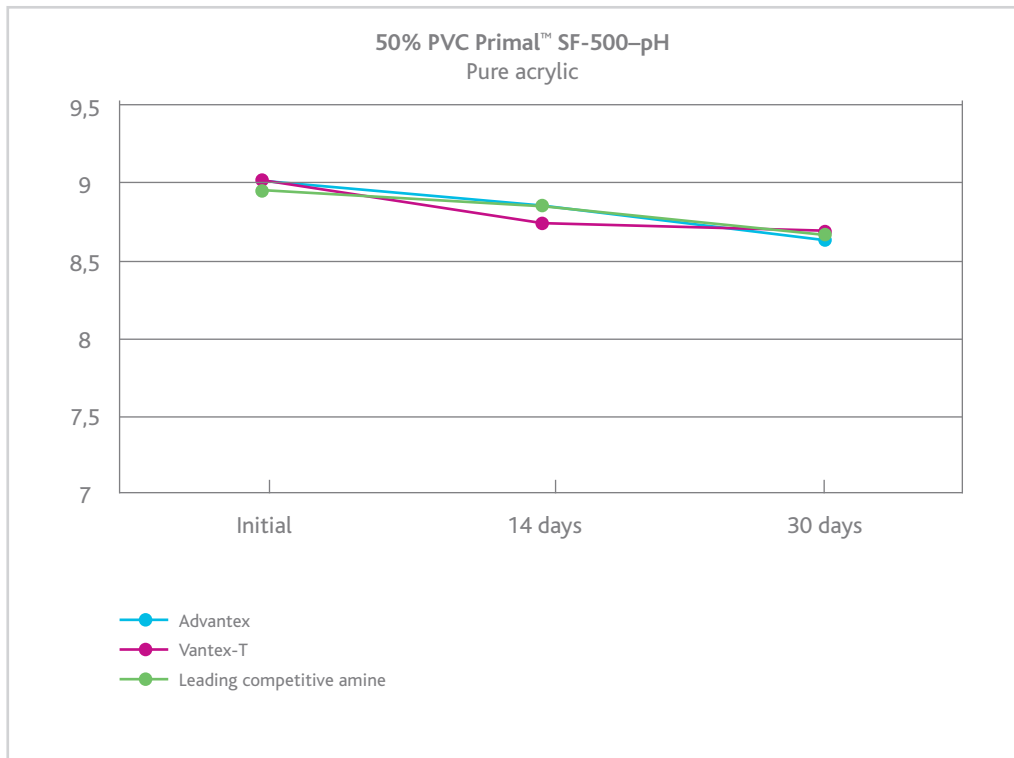
Formulation	Emulsion specifications ^a			Neutralizing agent	Emission VOC ($\mu\text{g}/\text{m}^3$)		Emission label
	Type	MFFT ($^{\circ}\text{C}$)	Tg ($^{\circ}\text{C}$)		NA's contribution	TVOC	
50% PVC Primal™ DC-420V ^b	Styrene acrylic	29	30	Vantex-T	0	405.7	A+
50% PVC Acronal® Eco559 ^c	Styrene acrylic	0	5	Vantex-T	0	250.1	A+
50% PVC Primal™ SF-500b ^b	Pure acrylic	2	11	Vantex-T	0	100.7	A+
50% PVC EcoVAE® 1608 ^d	VAE	0	10	Vantex-T	0	42.9	A+

^aData obtained from suppliers TDS/MSDS ^bDow Chemical Company ^cBASF ^dCelanese

Paint stability–pH

The pH of a paint system neutralized with Advantex, Vantex-T, and a commercially available amine did not show significant differences. There is no significant difference between Advantex, Vantex-T, and a leading competitive amine. The pH stability of all the samples is very good (pH<0.5 after 1m).





EASTMAN

The results of **insight™**

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