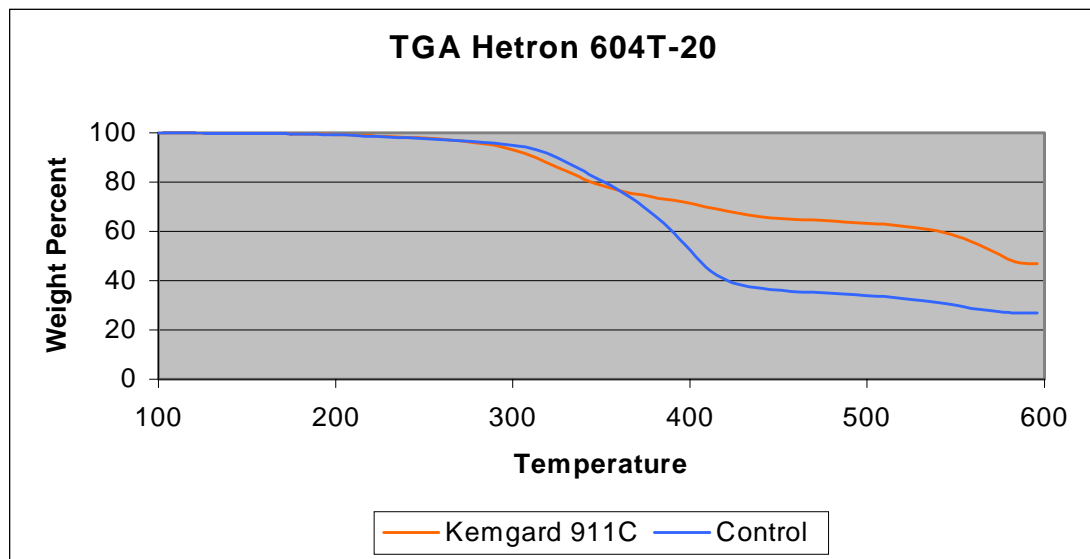


KemgardTM

Flame Retardant · Smoke Suppressant

Kemgard Promotes Char Formation in Polyester *Application Bulletin #2210*

The thermal decomposition of two samples of glass filled Hetron 604 T-20 (brominated aliphatic polyester – Ashland Chemical) was examined by thermal gravimetric analysis (TGA). In the control sample (no Kemgard) the onset of thermal decomposition occurs at 311 C. By 470 C, the sample has lost approximately 65% of its weight.



The TGA for the Hetron sample containing 10% Kemgard 911C is markedly different. In this case the onset for thermal decomposition occurs at 290 C. This indicates that the Kemgard promotes char formation in the Hetron 604T-20 resin. As the temperature is increased, further thermal decomposition is retarded relative to the control. For example at 470C, the sample containing Kemgard has lost 36% of its weight compared to 65% for the control.

These results suggest that the char formed in the presence of Kemgard offers protection against further thermal decomposition. The protective char serves as a physical barrier for combustible material, retarding flame spread and lowering of smoke generation.



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Glass-filled Polyester