TITLE

"Novel Benzoxazine Resin System for Flame Retardant Aircraft Interior Applications"

James Hoge
Senior Chemist – Advanced Materials Composites Group
Roger Tietze
Technical Manager – Advanced Materials Composites Group
Huntsman Advanced Materials
8600 Gosling Road
The Woodlands, Texas
Email: jim_hoge@huntsman.com

ABSTRACT

In recent years, there has been a substantial move to replace composite resin systems that contain halogen flame retardants and/or phenolic type resin systems for aircraft interior use. This has been driven not only by safety, health, and environmental concerns, but also by processing, quality, and product performance issues.

Benzoxazine resins are known for their inherent flame retardant properties including very low burn times, low smoke densities, low heat release, high char formation, and low toxicity of burned by-products. Benzoxazines are then a good candidate for composites that are used in aircraft interior applications.

Huntsman has developed a novel solvent based benzoxazine system for producing prepreg material. The composites made from these prepregs have excellent flame retardant properties, improved adhesion and toughness, and much lower heat cure temperature/time requirements. The presentation will discuss the experimental work and evaluate the test results to date on this system[s].