

Benchmark Comparison of Vacuum Infusion Resins for Aerospace Applications

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ABSTRACT

Recently the aerospace industry has had a lot of interest in the vacuum infusion process as a potential cost reduction to prepreg autoclave manufacturing. Resin manufacturers have been responding to this interest with several new products designed to service this market. The difference between these new resins and many of the previous ones that were designed for prepreg and resin transfer molding is that the viscosity of these resins has to be substantially less at the infusion temperature. Since these resin formulations are new to the industry there is little data on the processing and mechanical performance of the systems. The focus of this paper evaluates several of these resin systems to characterize the processing parameters for each resin system as well as the corresponding mechanical data on AS4 5H carbon fabric.