

*A Functional and Economic Comparison of Covering Films and Tapes Designed for Aircraft Thermal and Acoustic Insulation Systems*

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The development of materials that improve aircraft cabin fire safety presents functional and economic challenges. For example, PVF type covering films and tapes designed to meet FAR 25.856(a), the "radiant panel test," are normally heavier than the non-compliant materials that they replaced, which can increase aircraft operating costs.

PEKK, PEEK and lighter weight PVF based covering films and tapes offer a weight reduction of up to 50% compared with traditional PVF based materials, which can result in lower operating costs. But, at half the thickness, these lighter weight materials need to be examined for durability during the fabrication, installation and maintenance procedures. This paper will compare the new light weight covering films and tapes to their heavier counterparts to better understand their relative functional and economic advantages.