

Class C Cargo Compartment ULD Suppression Agent Penetration



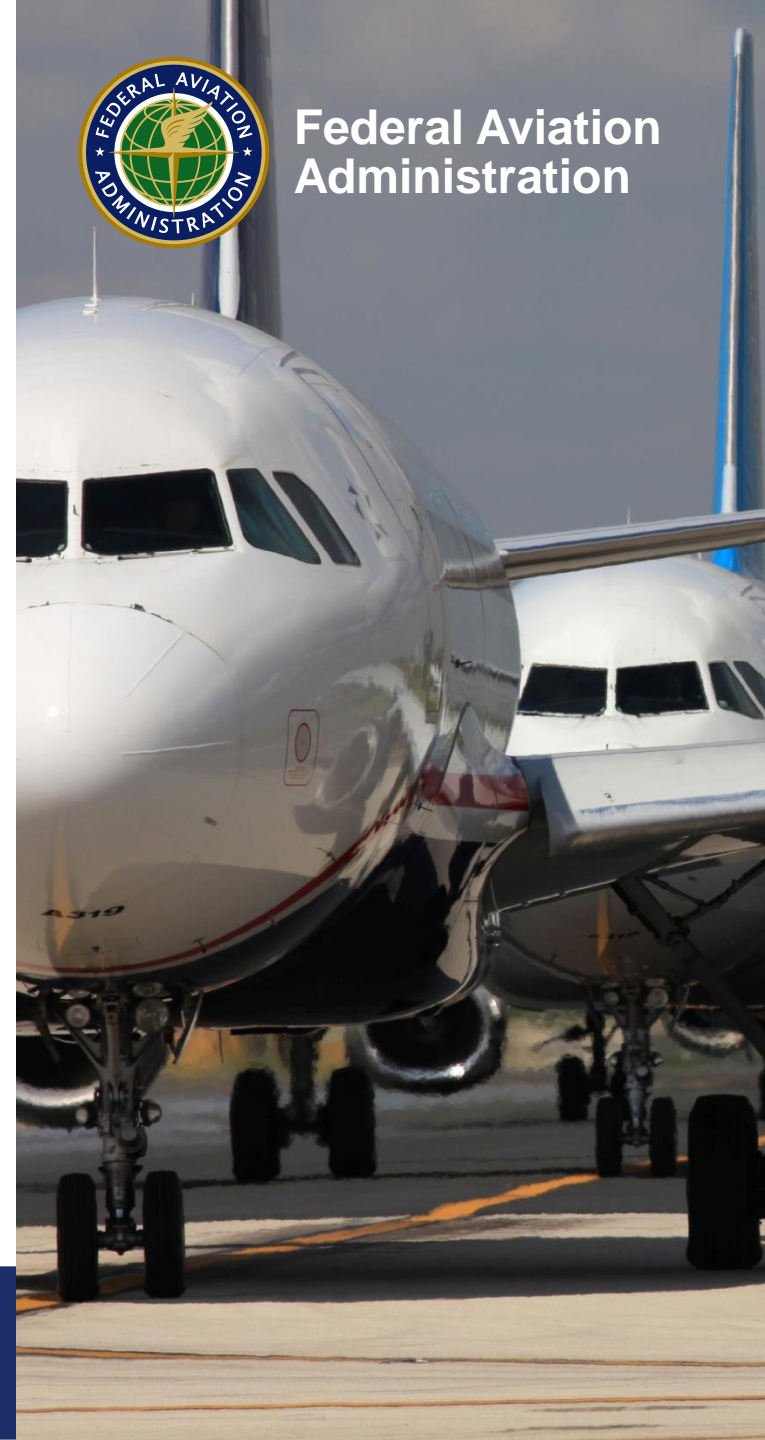
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Federal Aviation
Administration



Recent testing of both lithium metal and lithium ion batteries have resulted in explosive fuel/air mixtures generated by the vented gases from these batteries in thermal runaway. Prior to these recent results, it was assumed that Class C cargo compartments provided adequate protection against lithium ion battery fires. The ability of suppression agent to penetrate into typical ULDs in sufficient quantity determines the effectiveness of Class C compartments on this scenario.



DC-10 below floor cargo compartment (Cargo MPS test article). 2000 ft³ volume (56.6 m³)



Six aluminum AKE containers with flexible door coverings have been ordered.



31 pounds of HFC-125 will be used as a surrogate for Halon 1301. This is the quantity that would produce a volumetric concentration of 5% in the empty 2000 ft³ compartment.



4 continuous HFC-125 gas analyzers are available to simultaneously record gas concentrations. The probes will be located inside and outside of the containers.

Input is requested on the availability of any other similar data as well as internal container loading.

