

Update on Effects of Boundary Conditions on MPS testing

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The “Minimum Performance Standard for Aircraft Cargo Compartment Halon Replacement Fire Suppression Systems” is giving a guideline on how to build a test cell and how to conduct tests to benchmark a new suppression agent to replace Halon 1301. However, test results may depend on boundary conditions which are not covered by this guideline. To give an example, the exact kind and consistency of the shredded paper, which is used for bulk load and containerized load scenario, is not specified in detail. A comparative study conducted by Diehl Aviation has shown differences in heat release rate for typical shredded papers which are used in MPS testing. Another effect which has been identified is the leakage rate and the way it is measured. The comparison of two commonly used methods for measuring the leakage rate has shown significant differences in the resulting leakage rate for the MPS test compartment. This report is giving an overview on the possible impact of the variation of boundary conditions on MPS test results.