

Options to the Use of Halons for Aircraft Fire Suppression Systems- Report Update

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**Federal Aviation
Administration**



Outline

- Update the report “Options to the Use of Halons for Aircraft Fire Suppression Systems--2002 Update”
- Report was developed by a task group of this working group, IASFPWG.
- Describe 2002 report
- New task group is being formed to update this document
- Solicit participants of new Halon Options Task Group

Table of Contents: 2002 Report

- Introduction.
- Halocarbon Replacements.
- Alternative Technologies.
- Applicability of Technologies to Aircraft Applications.
- References.
- Companies and Manufacturers.

Chapter 1: Introduction

- Overview of Fire Protection.
- Environmental Overview.
- Toxicology Overview.
- Options.



Chapter 2: Halocarbon Replacements

- Toxicology.
 - Acute Toxicological Indices
 - Subchronic and Chronic Tests
 - Exposure Limits
- Environmental Considerations.
 - Ozone Depletion Potential
 - Atmospheric Lifetime
 - Global Warming Potential
 - Atmospheric Impacts of Blends
 - Regulatory Restrictions
- Commercialized Halocarbon Replacements.

Chapter 3: Alternative Technologies

- Foams.
 - Low-Expansion Foam
 - High- and Medium- Expansion Foams
- Water Sprinklers.
- Dry Chemicals.
 - Monammonium Phosphate
 - Sodium Bicarbonate
 - Potassium Bicarbonate
 - Proprietary

Alternative Technologies (cont.)

- Carbon Dioxide.
- Loaded Stream.
- Water Misting Systems
- Fine Particulate Aerosols
 - Spectrex Fire-Extinguishing Agent
 - PyroGen and Firepak
 - Soyus
 - Aero-K
 - KD-A96

Alternative Technologies (cont.)

- Inert Gases.
- Solid Propellant Gas Generators.
 - Primex Aerospace Inert Gas/ Powdered Aerosol Blend
 - Walter Kidde Aerospace/ Atlantic Research Corporation Consortium
- Combination and New Foam Agents
 - Envirorogel
 - Cease Fire
 - FlameOut
 - ColdFire
 - Fire-X-Plus

Chapter 4: Applicability of Technologies To Aircraft Applications

- Requirements.
- Engine and APU Compartments.
 - HCFCs, HFCs, PFCs, and Blends
 - Trifluoromethyl Iodide (FIC-13I1) and FIC-13I1 Blends
 - Gas Generators
- Hand-Held Extinguishers
 - Halocarbons and Halocarbon Blends
 - Carbon Dioxide
 - Combination Agents and Foams

Applicability of Technologies To Aircraft Applications (cont.)

- Cargo Compartment.
 - Water and Water- Based Agents
 - Halocarbons and Halocarbon Blends
 - Particulate Aerosols
- Lavatory Trash Receptacle
 - Water-Based and Combination Agents
 - Halocarbon and Halocarbon Blends

Other

- References.
- Appendix A- Companies and Manufacturers.



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