
Halon Options Task Group Update

Chapter 2:

Halocarbon Replacements

Tom Cortina
Halon Alternatives Research Corporation

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Chapter Overview

2. - Classes of Halocarbon Replacements

2.1 - Toxicology

2.2 - Environmental Considerations

2.3 - Regulatory Restrictions

2.4 - Commercialized Halocarbon
Replacements

2.5 - Halocarbon Replacements in
Development

Chapter Update

2. Classes of Halocarbon Replacements

- Hydrochlorofluorocarbons (HCFCs)
- Hydrofluorocarbons (HFCs)
- Fluoroiodocarbons (FICs)
- Fluoroketones (FKs) – added to this update
- Perfluorocarbons (PFCs or FCs) – removed, no longer being sold for fire protection

Chapter Update

2.1 Toxicology

- Information on acute, subchronic, chronic, anesthesia, cardiac sensitization – streamlined, some new information added on anesthetic effects
- Exposure Limits
 - Updated information on NFPA 2001 and EPA SNAP exposure limits
 - Information added on ISO 14520 exposure limits

Chapter Update

2.2 Environmental Considerations

- Information on ozone depletion potential (ODP), atmospheric lifetime, global warming potential (GWP) - updated

Chapter Update

2.3 Regulatory Restrictions

- Updated information on Montreal Protocol controls, accelerated HCFC phase out
- Information added on halon regulations in EU and Canada, revised EU critical use list (Annex VI), ICAO resolution halon replacement dates
- Information added on potential regulation of HFCs as greenhouse gases - Montreal Protocol, EU F-gas regulation

Chapter Update

2.4 Commercialized Replacements

- Update of Table 7 and 12
 - Eliminated agents no longer being sold such as PFCs, HCFC Blend A/D/E, HCFC-124
 - Added new agents - fluoroketone (FK 5-1-12)
- Update Table 8, 9, 10, 11, and 13
 - Added new information, mostly from ISO 14520, on design concentrations, weight and volume equivalents, performance
 - Updated information on environmental and toxicity properties, combustion byproducts

Chapter Update

2.5 Halon Replacements in Development

- New section added on the development of 2-bromo-3,3,3-trifluoropropene (2-BTP) as a possible replacement for Halon 1211 in handheld extinguishers