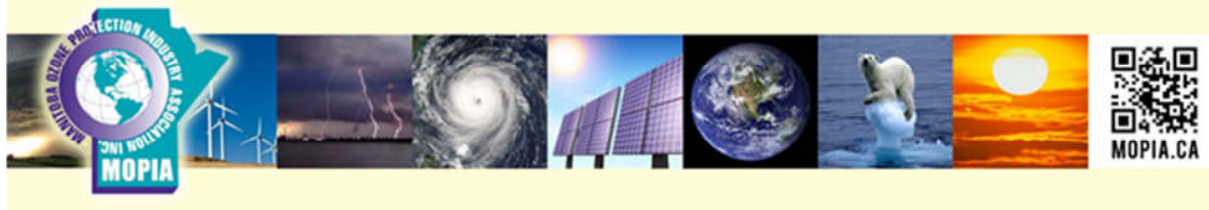


# Fire Protection – Halon Alternatives Regulatory Bulletin



Under Manitoba Regulation 103/94 (*Ozone Depleting Substances and Other Halocarbons*), Class 1, 2 and 3 substances are regulated which include (not limited to) HCFCs and HFC's, some of which are halon alternatives. **Companies purchasing or importing these regulated products may require a *Secondary Distributor (SD) Permit* and any persons directly handling/servicing these substances may require *certification* as defined by the Regulation.** SD Permits and technician certification are available through MOPIA.



## Common Alternatives for Halon 1301

FM200 (HFC-227ea)  
FE-13 (HFC 23)  
Inert gases  
Carbon Dioxide  
Water based systems  
AFFF  
PFC 410  
NAF SIII  
FE-36 (HFC 236fa)  
FE-25 (HFC 125)  
FE 241 (HCFC 124)  
Foam  
Dry powder

Several Halon 1211 substitutes have been approved by the United States Environmental Protection Agency's Significant New Alternatives Program (SNAP) program. Although these substitutes are not always ideal replacements for Halon 1211, they may be considered candidates for substitution, subject to specific use conditions as cited in 40 CFR 82 Appendix A to Subpart G, "Substitutes Subject to Use Restrictions and Unacceptable Substitutes." Most HCFC, HFC and PFC based substitutes are not recommended for residential use. However, the following substitutes are listed as part of a broad profile:

- HCFC-123, (banned in residential applications)
- HCFC-124 (FE-241), (banned in residential applications)
- HCFC Blend B (Halotron 1), (banned in residential applications)
- HCFC Blend C (NAF P-III), (banned in residential applications)
- HCFC Blend D (Blitz III), (for use in large outdoor application, banned in residential applications)
- Gelled Halocarbon/Dry Chemical Suspension (formerly Powdered Aerosol B)
- Surfactant Blend A
- Water Mist
- Carbon Dioxide
- Dry Chemical
- Water
- Foam

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The following are deemed acceptable subject to Narrowed Use Limits

- CF3I (banned in residential applications)
- HBFC-22B1 (due to high ozone-depletion potential this substitute has already been phased out of production)
- C6F14 (PFC-614 or CEA-614), (acceptable for non-residential uses when other alternatives are not technically feasible)
- HFC-227ea (proposed acceptable in non-residential uses only)
- In addition, HFC-236fa (FE-36), HFC-227ea and water mist with additives are pending a decision from EPA.
- The majority of Halon 1211 portable fire extinguishers found inside buildings can be replaced with dry chemical extinguishers, watermist and/or carbon dioxide hand held portable extinguishers depending on the hazard being protected. However, research and implementation is still ongoing to identify replacements for Halon 1211 extinguishers used in weapon system/specialty applications [fire and rescue vehicles on flight-lines and carrier decks, portable (wheeled) flight-line fire extinguishers, etc.]

Please note that any hand held portable extinguishers approved for use in Canada must be ULC Certified.

This information was prepared by MOPIA (January 2013) from various web resources and is for reference and information purposes only. Be aware that products, technologies, standards, regulatory conditions and codes change which may affect the reliability of the information portrayed herein.

## Resource List:

<http://www.worldhalon.com/file/alternatives.htm>

<http://www.reducehse.co.uk/fire-extinguishing-systems-halon-alternatives-fixed-new-technologies>

<http://www.ec.gc.ca/ozone/default.asp?lang=En&n=D90FFDBB-1>

<http://www.ul.com/canada/eng/pages/index.jsp>

[http://fireprotectionsnfpabuyersguide.org/results.php?category=Extinguishing%20Agents&heading=199&category\\_id=](http://fireprotectionsnfpabuyersguide.org/results.php?category=Extinguishing%20Agents&heading=199&category_id=)

<http://www.halcyon.com/NAFED/HTML/Halonalt.html>

[http://205.153.241.230/P2\\_Opportunity\\_Handbook/3\\_III\\_1.html](http://205.153.241.230/P2_Opportunity_Handbook/3_III_1.html)

[http://www.bfpe.com/fe\\_cleanagent.htm](http://www.bfpe.com/fe_cleanagent.htm)

<http://www.epa.gov/ozone/snap/>

Please note Halotron has an ODP and is a GWP product.

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