

TABLE 2

ACCEPTABLE HALON ALTERNATIVES UNDER EPA'S SNAP PROGRAM

Steaming Agents

AGENT	CONDITIONS	COMMENTS
HCFC Blend B (Halotron I)	See use restrictions A	See additional comments 1,2,3,4.
HCFC - 123 (FE-232)	See use restrictions A	See additional comments 1,2,3,4.
C <sub>6</sub> F <sub>14</sub> (CEA-614)	See use restrictions A,C	See additional comments 1,2,3,4.
HCFC Blend C (NAF P-III)	See use restrictions A	See additional comments 1,2,3,4.
HCFC Blend D (Blitz III)	See use restrictions A	See additional comments 1,2,3,4.
HCFC Blend E (NAF P-IV)	See use restrictions A	See additional comments 1,2,3,4.
HCFC-124 (FE-241)	See use restrictions A	See additional comments 1,2,3,4.
CF <sub>3</sub> I (Triiodide)	See use restrictions A	See additional comments 1,2,3,4.
HFC-227ea (FM-200, FE-227)	See use restrictions A	See additional comments 1,2,3,4.
HFC-236fa (FE-36)	See use restrictions B	See additional comments, 1,2,3,4,5.
C6-fluoroketone (Novec 1230)	See use restrictions A	See additional comments 1,2,3,4.
H Galden HFPEs	See use restrictions A	See additional comments 1,2,3,4.
Gelled Halocarbon/Dry Chemical Suspension (Envirogel)		Allowable in residential applications.
Water Mist		Potable water, natural seawater
Surfactant Blend A (Cold Fire)		Not a clean agent, but can reduce quantity of water needed to extinguish a fire.
Carbon Dioxide, Dry Chemical, Water, Foam		
<p>Additional Comments</p> <ol style="list-style-type: none"> <li>Discharge testing and training should be strictly limited only to that which is essential to meet safety or performance requirements.</li> <li>The agent should be recovered from the fire protection system in conjunction with testing or servicing, and recycled for later use or destroyed.</li> <li>EPA has no intention of duplicating or displacing OSHA coverage related to the use of personal protective equipment (e.g. respiratory protection), fire protection, hazard communication, worker training or any other occupational safety and health standard with respect to halon substitutes.</li> <li>As with other steaming agents, EPA recommends that potential risks of combustion by-products be labelled on the extinguisher (see UL 2129).</li> <li>Acceptable for local application systems inside textile process machinery.</li> </ol>		<p>Use Restrictions</p> <ol style="list-style-type: none"> <li>Non-residential use only.</li> <li>Acceptable in non-residential uses when manufactured using any process that does not convert perfluoroisobutylene (PFIB) directly to HFC-236fa in a single step.</li> <li>Acceptable where other alternatives are not technically feasible due to performance or safety requirements:             <ol style="list-style-type: none"> <li>because of their physical or chemical properties, or</li> <li>where human exposure to the extinguishing agents may result in failure to meet applicable use conditions.</li> </ol> </li> </ol>

## EPA EVALUATING NEW ALTERNATIVES

EPA is currently evaluating some newly proposed alternatives for halons. Goodrich 244 is pyrochemically generated aerosol that produces potassium bromide as the extinguishant. It is being developed by B.F. Goodrich Aerospace as a potential replacement for halons in aircraft cargo compartments, maritime engine rooms, and

similar large total flooding applications. NAF S-125 is a blend of HFC-125 and a small amount of limonene, which is intended to decrease the amount of HF produced during decomposition. NAF S-125 is manufactured by Safety Hi-Tech as a replacement for halons in total flooding applications. N<sub>2</sub> Tower Inert Gas Generator Fire Suppression Systems utilize non-azide solid propellant pre-packed canisters inside a total flood delivery system, which generate nitrogen to inert and suppress a fire in a normally occupied area.