

Update on regulations and standards

The European Union (EU) has published new regulations that replace Council Regulation EC 3093/94. These regulations ban the sale and use of CFCs, halons, carbon tetrachloride, hydrobromofluorocarbons and 1,1,1-trichloroethane, and accelerate control on the sale and use of HCFCs. A list of critical halon uses mandated by the new rules are given below:

Halon-1301:

- ↳ In aircraft for the protection of crew compartments, engine nacelles, cargo and dry bays;
- ↳ In military land vehicles and naval vessels for the protection of spaces occupied by personnel and engine compartments;
- ↳ For the making inert of occupied spaces where inflammable liquid and/or gas release could occur in the military, oil, gas and petrochemical sector, and in existing cargo ships;
- ↳ For the making inert of manned communication and command centres of the armed forces or otherwise essential for national security;
- ↳ For the making inert of spaces where there may be a risk of dispersion of radioactive matter, in the Channel tunnel and associated installations and rolling stock.

Halon-1211:

- ↳ In hand-held fire extinguishers and fixed extinguisher equipment for engines for use on-board aircraft;
- ↳ In aircraft for the protection of crew compartments, engine nacelles, cargo and dry bays;
- ↳ In fire extinguishers essential to the personal safety for initial extinguishing by fire brigades; and
- ↳ In military and police fire extinguishers for use on persons.

In the United States, the National Fire Protection Association (NFPA) has completed revision of its standards document on halon replacement agents, NFPA 2201 – Standard on Clean Agent Extinguishing Systems. Some of the changes made include: new exposure limits for inert gases and halocarbon agents, inclusion of a pharmacokinetic model for determining exposure times for halocarbon agents and the addition of a marine chapter. For inert gases, the revised standard allows exposure in normally occupied areas at a design concentration of 43 and 52 per cent for three minutes and below 43 per cent (above 12 per cent oxygen) for five minutes. Inert gas systems designed for concentrations above 62 per cent (8 per cent oxygen or below) may only be used in unoccupied areas where personnel shall not be exposed to such oxygen depletion.

The revised 2001 standard incorporates the use of an EPA-sponsored, physiologically based pharmacokinetic (PB-PK) model to determine exposure limits for halocarbon agents. The PB-PK model allows inhalation exposures of halocarbon agents to be assessed in terms of the chemical concentrations in blood during exposure. The revised standard also recommends a design concentration of 30 per cent above the extinguishing concentration for Class B hazards and systems that can only be actuated manually. *Contact: Halon Alternatives Research Corp., 2111, Wilson Boulevard, 8th Floor, Arlington, VA 22201, the United States. Tel: +1 (703) 5246 636; Fax: +1 (703) 2432 874. (Website: <http://www.harc.org>)*