



HYDROFIRE ΕΠΕ

Buildings - Industry - Marine – Waterworks
END OF AG. PANTELEIMONOS Str. (ELEONAS)
GR-12241 EGALEO,

Tel.: +30 210 3412 749-750 Fax: +30 210 3412 406
www.hydrofire.gr, email: info@hydrofire.gr



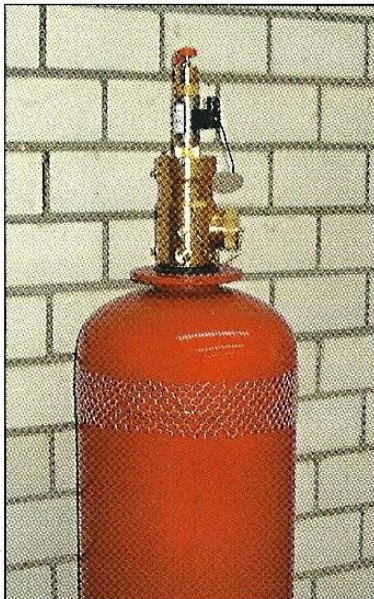
HFC-227_{ea}

“Most widely used clean agent replacement for Halon 1301 globally”

HFC-227_{ea} is a fire extinguishing agent used to replace Halon 1301 applications with highly satisfactory results. It must be taken into account that according to the Regulation n° 2037/2000 of the European Parliament and of the Council of 29 June 2000, the fire suppression systems and extinguishing agents containing Halon, must be replaced before 31 December 2003. Halon is considered as a hazardous waste and must be delivered to any authorized Manager of Hazardous Waste, issued by the corresponding Public Administration; otherwise, it may assume administrative responsibility and be sanctioned with fine or assume penal responsibility and be sentenced with medium-term prison.

HFC-227_{ea} is an odorless, colorless, electrically non-conductive and valid for Class A fires (solid materials) and Class B fires (flammable liquids).

It's an effective agent that provides superior fire protection for sensitive electronic equipment as computer rooms, telecommunication stations and facilities, industrial process control rooms, etc.



HFC-227_{ea} extinguishes fire by a physical mechanism, weakening the fire until it disappears by heat absorption. It transfers the physical-chemical heat, absorbs the heat from the flame and combustible (endothermic rupture point). It's a very effective extinguishing agent, its minimum concentration for normal Class A fires is 5.8% by volume and its design concentration is 7.5% (very low concentrations compared with other Halon 1301 replacements). Nowadays every application is a matter of cost. The space costs money, so it is very important to make a good use of it. The HFC-227_{ea} system requires minimal container storage space, compared to other similar alternatives, as CO₂ or the inert gases (even seven times less).

Regarding the installation, the agent is pressurized with nitrogen at 24 bar and it is stored in steel cylinders with certified valves. Its low storage pressure (34 bar @50°C) allows the using of conventional pipes and accessories like threaded joints, reducing the installation costs. The discharges are safe and noiseless. Other gases at high working pressure need thicker wall pipes, more expensive, difficult to find and more complicate to

handle. Also their discharges are very noisy and aggressive and could even displace dangerously items located close to the nozzles.

Among the extinguishing fixed systems in the market, certain products make progress and stand out for many advantages. HFC-227_{ea} is one of those.

HFC-227_{ea} is an extinguishing agent based upon the requirements of ISO 14520, UNE 23572 and NFPA 2001 standards.





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HFC-227ea physical properties

Chemical name	Heptafluoropropane
Chemical formula	CF ₃ CHFCF ₃
Name according to (ISO14250, UNE23570 and NFPA2001)	HFC-227ea
Molecular weight	170
Boiling point at 1.013 bar	-16.4°C
Liquid density at 20°C	1407 kg/m ³
Critical temperature	101.7°C
Critical pressure	29.12 bar
Vapor pressure at 20°C	3.91 bar
Relative electrical resistance [at 1 atm, 25°C (n ₂ = 1.0)]	2.0
Maximum fill density	1.12 kg/l
Typical design concentration for heptane	8.6%
Flood factor for heptane at 20°C	0.686 kg/m ³
Design concentration (for Class A surface)	7.5%
Flood factor (for Class A surface)	0.591 kg/m ³
NOAEL	9%
LOAEL	10.5%
Ozone Depletion Potential	0
Overpressurization with nitrogen	24 bar
Cylinder working pressure at 50°C	34 bar
Recommended piping	DIN2440

Safe for occupied
areas.
Discharging time
of 10 seconds

General characteristics

- **Halon 1301 replacement** (most widely used globally).
- **Fast extinguishing.**
- **Highly effective, low extinguishing concentration** (7.5%).
- **Suitable for occupied areas.**
- **Low pressure storage** (24 bar) **and noiseless discharges.**
- **Requires minimal container storage space.**
- **No residues left behind after application.**
- **Electrically non-conductive.**
- **Zero ozone depleting potential.**
- **Approvals:**
ISO14520, UNE23572, NFPA 2001 and EPA SNAP listed.

Applications

- **Control rooms.**
- **Computer rooms.**
- **Archives, libraries.**
- **Telecommunication stations.**
- **Laboratories, petrochemical facilities, museums, art galleries, etc.**