

FE-36™

Fire Suppressant

Protect what matters most.



Chemours



FE-36™ protects vital computer equipment for all types of communications systems.

Protecting What Matters Most

Chemours is committed to working with its partners in the marketplace to develop solutions that add value to the fire protection industry, improve the safety and quality of life for people around the world, and provide you with peace of mind. Our goal in fire protection, like that of our customers, is to protect people and valuable assets. HFC-236fa is a widely used clean agent that is nonflammable and has low toxicity and zero ozone depletion potential (ODP). HFC-236fa is also known as FE-36™ fire extinguishant.

The value of FE-36™

FE-36™ is intended to prevent or extinguish fires in situations where conventional extinguishing agents, such as water, dry chemicals, and carbon dioxide, are unacceptable, because they cause collateral damage, significantly interrupt business productivity, or present a safety risk. FE-36™ portable fire extinguishers are used to protect high-value assets, such as: process control rooms, computer rooms, telecommunications facilities, museums, archives, hospitals, banks, laboratories, and airplanes.

FE-36™ is proving to be the standard in-kind replacement for Halon 1211 in portable fire extinguishers. FE-36™ has comparable performance and efficiency to Halon 1211, lower toxicity, as well as zero ODP. In a portable fire extinguisher, FE-36™ is discharged as a stream of gas and liquid droplets that penetrate into the fire area, stopping the combustion process through heat absorption and chemical interaction. FE-36™ is also a replacement for Halon 1301 in local application systems, such as modular systems.

Applications

Portable Fire Extinguishers. FE-36™ is the most widely used zero ozone-depleting replacement for Halon 1211 in portable fire extinguishers and is approved for use on Class A, B, and C fires. Compared to Halon 1211, FE-36™ has lower toxicity and is exceptional for use in relatively small enclosures. Portable fire extinguishers containing FE-36™ and certified by UL and EN3 are commercially available from several manufacturers. The UL-listed units carry a 2-B:C, 5-B:C, 1-A:10-B:C, and 2-A:10-B:C rating. The EN3-listed units carry a 34B, 5A-55B, and 80A-70B rating. All EN3-listed units are safe for use on live electrical equipment up to 1000 V at a distance of 1 meter.

Local Application Systems. FE-36™ is used as a replacement for Halon 1211, Halon 1201, and CO₂ in local application systems. This is a specialized application where there is not a complete enclosure, such as a work bench, fume hood, or engine bay. FE-36™ is also used in modular systems. This application is a small self-contained total flooding unit. It is well suited for cell phone tower support buildings, electric cabinets, electronic vaults, precious item storage vaults, or any other area requiring fire protection, no collateral damage, and low toxicity.

FE-36™: Safer for People, Assets, and the Environment

Of the many methods and substances used to prevent, control, and extinguish fire, FE-36™ fire extinguishing agent offers unique advantages over traditional extinguishants. It is safe for people and assets and is an environmentally preferred option.

Safe for People. FE-36™ is intended for use as a streaming agent providing a gas concentration sufficient to prevent or extinguish a fire. FE-36™ is safe for use in occupied spaces. The Environmental Protection Agency (EPA) and the National Fire Protection Association (NFPA) classify FE-36™ as acceptable for normally occupied spaces.

Safe for Assets. FE-36™ is electrically non-conductive, non-corrosive, and free of residue. As a gaseous agent, FE-36™ targets the flame and prevents or extinguishes the fire. Operations can resume quickly, particularly if early detection methods are in use. As a clean agent, FE-36™ leaves no residue that would cause damage or post-fire cleanup. This means less collateral damage and minimal business interruption, reducing the potential costs of any fire incident.

Safer for the Environment. FE-36™ does not contain chlorine or bromine and has zero ODP. Like many fluorine-based gases, HFC-236fa has some global warming potential (GWP). When a FE-36™ fire extinguishing system reaches the end of its useful life, the agent can be reclaimed for use in other systems. FE-36™ acts as a long-term insurance policy, providing improved security for people and assets with minimal impact on the environment.

FE-36™ is listed as an acceptable Halon replacement in the EPA SNAP program for Halon 1211 in portable fire extinguishers and local application systems. FE-36™ is non-corrosive, electrically non-conductive, free of residue, and has an ODP of zero. It is ideally suited for protecting high-value equipment, such as in computer rooms, telecommunication facilities, and aircraft.

FE-36™ also has an application as a total flooding agent and explosion suppression agent in normally occupied spaces.

The heptane cup burner extinguishing concentration for FE-36™ in air is 6.5% (volume).

Properties of FE-36™

Chemical Formula	CF ₃ -CH ₂ -CF ₃
Chemical Name	1,1,1,3,3,3-hexafluoropropane
ASHRAE Designation	HFC-236fa
Molecular Weight	152.04
Boiling Point	-1.4 °C (29.4 °F)
Liquid Density at 25 °C	1360 kg/m ³
at 77 °F	84.89 lb/ft ³
Vapor Pressure at 25 °C	272.4 kPa
at 77 °F	39.5 psia
Ozone Depletion Potential	Zero
Atmospheric Lifetime	209 years



Heat and smoke can quickly damage sensitive components. FE-36™ acts quickly to prevent or extinguish fires.



The visitors, library, and even collections are all safe with a system that utilizes FE-36™.

Other Clean Agent Fire Extinguishants from Chemours

FE-25™

FE-25™ is an excellent choice for total flood suppression systems, where release of water, dry chemicals, or carbon dioxide can cause collateral damage to irreplaceable museum assets. Ease of installation makes FE-25™ an attractive choice for museums. FE-25™ is safe for use in occupied spaces, leaves no residue, and is an environmentally acceptable alternative to Halon.

FE-13™

FE-13™ is a clean, environmentally acceptable, "people friendly" replacement for Halon 1301 as a total flooding agent under all use conditions. It is particularly applicable where high concentrations are needed for improved safety margins, the protected spaces are large, or temperatures are likely to go below 0 °C (32 °F).

FM-200™

FM-200™ is a clean agent fire extinguishant replacement for Halon 1301 with zero ODP. It is used in total flooding applications for the protection of people and high value assets, such as those found in computer rooms, telecommunication facilities, museums, and clean rooms. The EPA and NFPA classified heptafluoropropane or HFC-227ea as acceptable for total flooding of normally occupied spaces at controlled concentration and egress times.

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