



Coffee Break Training - Fire Protection Series

Portable Extinguishers: Clean Agents for Streaming Applications

No. FP-2012-32 August 7, 2012

Learning Objective: The student shall be able to describe the term “clean agent,” how agents are used in streaming applications, the benefits of their use, and identify appropriate applications.

Imagine extinguishing a fire with an agent that quickly evaporates leaving behind no residue. Any fire-related damage would be contained within the fire zone, and surrounding equipment and articles would not be covered or contaminated with water, foam, or dry chemical.

Such clean firefighting agents are not “new technology.” They have been around since the late 1800s when carbon tetrachloride was used in “fire grenades” where the liquid agent was contained in thin-walled glass containers and thrown into the fire. This was later modernized into a safer application through the use of portable extinguishers containing Halon 1211, and today, they incorporate more environmentally friendly agents such as Halotron® I and FE-36™.



The streaming clean agent fire extinguisher will leave no residue after the fire is suppressed.

Clean agents are used in total flooding applications, where the agent completely fills a room to a desired concentration level, and in streaming applications, where the agent discharges from a hand-held or wheeled extinguisher. National Fire Protection Association (NFPA) 10, *Standard for Portable Fire Extinguishers*, defines “clean agents” as “electrically non-conducting, volatile, or gaseous fire extinguishants that do not leave a residue upon evaporation.” Clean agents are effective for use on Class A, B, and C fires and are available from numerous portable fire extinguisher manufacturers in various sizes and Underwriters Laboratories (UL) ratings.

In addition to being effective extinguishants, the biggest value of clean agents is that they do not cause any additional post-fire collateral damage. This is particularly important when dealing with sensitive electronic equipment and other high-value assets. Clean agents have proven effective in extinguishing fire in computer and data center operations, telecommunication control hubs, laboratory environments, libraries and museums, and other environments where the use of water or solid, powder-based extinguishing agents could cause secondary damage equal to or exceeding that caused by the fire itself. Another significant advantage of clean agents is that they help limit business interruption and equipment downtime. In these cases of opportunity cost, the positive financial impact of the clean agent can outweigh higher upfront investment costs.

This Coffee Break Training tip courtesy of the Fire Equipment Manufacturer’s Equipment Association.



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