Clean Agent Fire Extinguishing Systems

These systems contain electrically nonconducting, volatile, or gaseous fire extinguishing agents that don't leave a residue upon evaporation (per NFPA 2001 paragraph 1-3.1). They are effective for total flooding protection against hazards involving liquid flammable materials, electrical equipment, and ordinary solid combustibles in occupancy arrangements which produce only surface burning. In general, these agents are not effective or appropriate for hazards which produce deep-seated burning or for those which involve chemicals containing their own oxygen (such as cellulose nitrate), metal hydrides, or reactive metals (such as sodium, magnesium or uranium).

Clean Agent systems are similar in many respects to Halon 1301 and carbon dioxide systems. Discharge of the agent by total flooding or local application may create atmospheric hazards to personnel. Toxic thermal decomposition products can be minimized by fast fire detection coupled with rapid agent discharge. Personnel should not remain in the area following system discharge. Table A-1-5.1.1 of NFPA 2001 provides information on toxicological and physiological effects covered in this equipment classification. The No Observed Adverse Effect Level (NOAEL) is the highest concentration at which no adverse physiological or toxicological effect has been observed. The Lowest Observed Adverse Effect Level (LOAEL) is the lowest concentration at which an adverse physiological or toxicological effect has been observed.

Systems can only be FM Approved under this classification if they use agents having a component Approval. The system Approvals specifically reference the relevant agent Approval. Individual agent listings appear under the category Clean Extinguishing Agents.

Compatible FM Approvals controls must be used. (See AUTOMATIC RELEASES FOR EXTINGUISHING SYSTEMS AND OTHER FIRE PROTECTION EQUIPMENT under ELECTRICAL SIGNALING.)

Application of this equipment should be subject to the limitations specified and subject to FM Global's acceptance of plans prior to installation. Required design concentrations vary from agent to agent and depending upon maximum design parameters, the concentration may vary among system manufacturers. The design concentrations listed by the system manufacturers are generally accepted in electrical/electronic hazards, i.e. computer, telecommunication areas, provided that Class A ordinary combustibles are kept to a minimum, thereby minimizing the potential for a deep seated Class A fire.

System charging and recharging shall be done only by the manufacturer or a FM Approved representative.

The Clean Agent systems FM Approved under this classification have been addressed by NFPA 2001, Standard on Clean Agent Extinguishing Systems, 1994 Edition and must be listed in the United States Environmental Protection Agency (EPA) Significant New Alternatives Policy (SNAP) as an acceptable substitute to Halon 1301.

Jurisdictions ***outside*** the United States may ***not*** recognize NFPA and EPA sanction of certain clean agents. Local and national governmental regulations should be consulted***prior*** to agent selection.

*Alternative to Halon 1211 and Halon 1301.

FireFlex® DUAL Integrated Fire Protection Systems

System Designation:	FireFlex® DUAL Integrated Fire Protection Systems
System Type:	Pre-Engineered, Integrated with Preaction Sprinkler System and Optional Control Panel
Integrated Fire Alarm Control Panel (Optional):	Potter Electric Signal Company Model PFC-4410RC
Available Integrated Preaction Sprinkler Systems:	Viking Corporation Single Interlock Preaction Sprinkler System Viking Corporation Double Interlock Preaction Sprinkler System
Integrated Clean Agent Extinguishing System:	SEVO 1230
Agent Identification:	3M™ NOVEC™ 1230
Available Clean Agent Cylinder Sizes:	40 lb, 76 lb, 164 lb, 322 lb, 601 lb, 850 lb
Minimum and Maximum System Storage Temperatures:	0°F to 130°F (-18°C to 54°C) * * The minimum clean agent system storage temperature is below the freezing point of water. All sprinkler equipment must be properly heated, protected, and maintained above 40°F (4.4°C) to prevent any freezing conditions that could impair its operation.
Minimum and Maximum Nozzle Heights:	7 ft (2.1 m) to 16.4 ft (5.0 m)
Types of Nozzles Available:	180°, 360°
Maximum Area of Coverage for Nozzle Type:	180°: 32 ft x 32 ft (9.8 x 9.8 m) 360°: 32 ft x 32 ft (9.8 x 9.8 m)

Owner's Operation and Maintenance Manual:	FireFlex® DUAL Single-Interlocked Owner's Operation and Maintenance Manual, Document #FM-0860-0-3D, June 2011 FireFlex® DUAL Double-Interlocked Owner's Operation and Maintenance Manual, Document #FM-0860-0-1D, June 2011
Limitations or Exceptions to the Approval:	The integrated control panel must be used in conjunction with compatible FM Approved detectors and initiating devices. If a remote control panel is being used in place of the integrated control panel, the panel must be FM Approved for use with gaseous and preaction systems. In addition to those stated in this listing and the referenced manuals, the requirements and limitations defined in the following Approval Guide listings must also be followed, as applicable: Fire Protection – Automatic Sprinkler Systems – Sprinkler Systems – Preaction Sprinkler Systems – The Viking Corp – Viking Single Interlock Preaction Sprinkler System Fire Protection – Automatic Sprinkler Systems – Sprinkler Systems – Refrigerated Area Sprinkler Systems – The Viking Corp – Viking Double Interlock Preaction Sprinkler System Fire Protection – Automatic Sprinkler Systems – Automatic Releases for Preaction and Deluge Sprinkler Systems – Potter Electric Signal Company – Models PFC-4410-RC, PFC-4410S-RC Fire Alarm Controls Fire Protection – Fixed Extinguishing Systems – Clean Agent Fire Extinguishing Systems – Sevo Systems, Inc. – SEVO 1230

Company Name:	FireFlex Systems Inc
Company Address:	1935 Lionel-Bertrand Blvd, Boisbriand, Quebec J7H 1N8, CAN
Company Website:	http://www.fireflex.com
New/Updated Product Listing:	No
Listing Country:	Canada
Agent Type:	3M Novec 1230
Certification Type:	FM Approved