



## **Portable Fire Extinguishers are Effective, Easy to Use, Safe and Cost Efficient**

### **Data from across the country backs that up.**

**They can extinguish incipient fires before sprinklers activate.**

1. According to the 2017 NFPA report "U.S. Experience With Sprinklers", citing fires from 2010-2014, there were a total of 49,840 reported structure fires annually in buildings equipped with sprinkler systems. Of those fires, a total of 41,800 never grew large enough to activate the sprinkler system (confined and unconfined fires). This means that some 84% of the fires reported in sprinklered buildings did not grow large enough to operate the sprinkler system. The systems were operational and unimpaired; the fire simply did not grow large enough to activate them. One conclusion that can be drawn from this statistic is that many fires are being suppressed by building occupants. (Reference: Table 6, page 21 of 2017 NFPA report titled "U.S. Experience With Sprinklers" by Marty Ahrens). This is consistent with the prior NFPA report in 2013 "U.S. Experience With Sprinklers".

**Thousands of fires are put out annually by portable fire extinguishers.**

2. The Consumer Product Safety Commission conducted a survey and analyzed the data from survey participants, the results of which were published in 2009. The study targeted residences, including apartments. According to this report, there were a total of 7,430,000 residential fires in the United States annually. This includes both fires attended by a fire department, and those where the fires went unreported. According to this report, 5% of the fires were put out using a portable fire extinguisher. This means that 371,000 residential fires were suppressed using portable fire extinguishers annually at the time of the survey. While there may not be a direct correlation between residential and commercial fires, it's clear that thousands of fires are extinguished annually by people using portable fire extinguishers, both in commercial and residential occupancies. (Reference: 2004-2005 National Sample Survey of Unreported Residential Fires, U. S. Consumer Product Safety Commission, Michael A. Greene, Division of Hazard Analysis, Directorate for Epidemiology, page 159, Table 8-4).

**Extinguishers are an excellent fire protection investment.**

3. According to the Texas State Fire Marshal, there were 47 fires in state owned buildings from 2008-2010. Of those fires, 16, or 40%, were suppressed using portable fire extinguishers. This included both sprinklered and unsprinklered buildings. (Reference: Texas State Fire Marshal Paul Maldonado, 2010).
4. The cost/benefit analysis of portable extinguishers is indisputable. According to a study conducted by Richard Bukowski at RJA (formerly of NIST), the total lifecycle cost of a portable extinguisher ranges from a low of one half of one cent to a high of just under four cents per square foot per year. This includes acquisition costs and all inspection, maintenance, and upkeep for the life of the extinguisher. This is probably some of the lowest cost fire protection available, and has shown to be very effective.

(Reference: Study the Life Cycle Cost of Portable Fire Extinguishers, Richard W. Bukowski, P.E., FSPE, Rolf Jensen and Associates, Inc. 2014).

They can be used effectively with little or no training.

5. Portable extinguishers can be used safely and effectively by persons with little or no training in their use. According to a study conducted by Worcester Polytechnic Institute and the Eastern Kentucky University, of 276 subjects, 98% were able to successfully use an extinguisher by pulling the pin, squeezing the trigger, and discharging the extinguisher. Almost three-quarters (74%) used proper technique of aiming at the base of the fire and used a back and forth motion until the fire was extinguished. After minimal training, the subjects showed a measurable increase in effectiveness. (Reference: "Ordinary People and Effective Operation of Fire Extinguishers"), (April 27, 2012 by Brandon Poole, Undergraduate Student, WPI; Kathy Ann Notarianni, Professor and Head of Department, Fire Protection Engineering, WPI; Randy Harris, Lab Coordinator, Fire Protection Engineering Department, WPI; William D. Hicks, Assistant Professor, Fire and Safety Engineering Technology Program, EKU; Corey Hanks, Lab Coordinator, Fire and Safety Engineering Technology Program, EKU; Gregory E. Gorbett, Program coordinator, Fire and Safety Engineering Technology Program, EKU.)

Portable fire extinguishers are an important part of fire protection.

6. There should be no linkage between portable extinguishers and sprinklers. They are different technologies fitting different circumstances. Extinguishers are to be used in incipient fires; sprinklers activate when the fire grows larger. The determination of whether each technology should be implemented depends upon a number of factors, none of which involve what other technologies are present.
7. Both model fire codes (NFPA 1 and the International Fire Code) recognize the need for layered fire protection and do not allow for a trade-off between sprinklers and portable fire extinguishers.

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Founded in 1930, the Fire Equipment Manufacturers' Association is an international, non-profit trade association dedicated to manufacturing commercial fire protection equipment to serve as the first line of defense against fire in its early stages.

For more information and a list of current FEMA members, visit the FEMA website at [www.femalifesafety.org](http://www.femalifesafety.org).

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