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- ▼ Column Archives
- ▶ Project Archives
- ▶ Ezine Archives
- ▶ Building Tips
- ▶ Product Index
- ▶ Online Store
- ▶ A.T.B. Links
- ▶ What's New
- ▶ Media Info

## Bulletin 36 Residential Fire Sprinklers

### Residential Fire Sprinkler Information Sources / Fire Prevention Tips / Checklists

I have always been fascinated with fire sprinklers. It goes way back into my childhood. My mother would take me shopping to a major department store in downtown Cincinnati called Shillito's. As we would ride the escalators between floors, I would always stare at the fire sprinkler heads above me.

Maybe it was the colored liquid in the glass vials that grabbed my attention. It could also have been their shiny appearance, as most of them were polished chrome. All I can remember is that there were hundreds of these things sticking down from the ceiling just about everywhere.

I didn't fully understand the importance of them as a child. No doubt Mr. Shillito did, though. The sprinklers were put in to save his business. He quite possibly was encouraged to do so by his insurance company. To this day, there has never been a catastrophic fire in this building. Oh sure, there probably have been fires, maybe they were reported deep within the newspapers. But, the sprinklers probably extinguished them or controlled the fires before the fire department ran into the building.

#### Fire & Mathematics

If you have an adequate supply of combustible materials, an unlimited amount of oxygen, a match, a watch, and pencil and paper, you can witness a sobering display. The growth of a fire is rapid. If you could effectively measure the amount of fire (this can be done by scientists), you would see that the size of the fire doubles, triples, or quadruples in size but yet the time that has passed has not doubled, tripled, or quadrupled. Mathematicians call this a non linear function. Professional firefighters call it a recipe for death and destruction.

If you pay attention to eye witness accounts of the spread and or growth of fires, you know that this is true. Often you here of people who say that, ...all of a sudden there was fire everywhere. Just moments before I was in the room and there was nothing going on.

I visited a residential house that had been heavily damaged by fire just about one year ago. This fire started near the furnace in the basement. A mother, child, and a painter were in the house. The painter was working in the living room, while the mother and child were in the basement family room,

just 10 feet away from the furnace room.

The painter noticed faint smoke issuing from a heating vent. He went to the basement to inform the mother and child. They opened the door to the furnace room. It was filled with smoke and fire.

They ran out of the house to a neighbor. The neighbor called 911. The closest firehouse was less than 600 feet away! All of what I described so far happened in 3 minutes. The fire department responded immediately and began to extinguish the fire.

The house was heavily damaged by fire. Well over \$100,000. I walked through the house the day after the fire. The telephone in the kitchen had melted from the heat. The shower curtain in the second floor bathroom had melted, yet there was no fire on the second floor. The second floor area was full of ash, heavy smoke, and steam damage. Virtually all of the possessions of this family were ruined! Fortunately, everyone got out of the house unhurt. Think what might have happened if this fire had occurred at 2:30 a.m.??

### **Sprinklers**

In the story I just described, I forgot to mention that a water pipe was only 10 feet away from the furnace. A plumber could have installed a simple \$8.00 sprinkler head in the furnace room. This sprinkler would have begun to discharge water as soon as the temperature would have reached 155 degrees F in the furnace room. Do you think that would have helped? I thought so. How much would it have cost to install? Maybe \$150 if you had a plumber do it. A DIY r with plumbing experience could do it for less than \$20.

If building a new home or remodeling, fire sprinklers should be given serious consideration. New residential fire sprinklers are sleek, attractive, and available in different finishes. They bear no resemblance to their cousins that I used to see at Shillito s.

You will receive a healthy discount on your house insurance. You will have peace of mind. They can save lives and property. I urge you to think about this. TC

### **Fire Sprinkler Information Sources**

Residential fire sprinklers have received very little attention. This is unfortunate, because they can dramatically increase your chances of survival in a fire. They also go a long way in limiting damage caused by a fire. Sprinklers simply make sense.

The following Associations offer free literature concerning residential fire sprinklers. This information is fantastic. All you have to do is call or write them a letter asking for the information. You will be delighted with the amount and quality of the literature.

If you want a really dramatic example of the effectiveness of

residential sprinklers, I highly recommend that you consider purchasing a 35 minute video produced by the National Fire Sprinkler Association (NFSA). I contacted the NFSA and they indicated that they would offer this video to readers of my column for the same price they sell it to their members. The cost to you, for the video, is only \$29.95. It normally sells for \$59.95! This video will convince you, in all likelihood, to install sprinklers. I was amazed at how quickly the sprinklers work! This \$30 expenditure is well worth it. If you decide to purchase this video, MAKE SURE you identify yourself as a reader of my column. Also, mention the name of Mr. David VanDeyar. He is the NFSA individual who authorized the reduced price of the video. Maybe an NFSA member will rebate the cost of the video to you should you choose him as the installation contractor. Consider giving it a try. It never hurts to ask.

- National Fire Sprinkler Association  
Robin Hill Corporate Park  
Route 22  
Patterson, New York 12563  
1-914-878-4200 Fax 1-914-878-4215
- American Fire Sprinkler Association  
12959 Jupiter Road, Suite 142  
Dallas, Texas 75238-3200  
1-214-349-5965 Fax 1-214-343-8898

Contact both of these organizations. They have different literature, all of which is very helpful. Also, if after you review the information you have questions, consider speaking with an official of your local fire department. They can possibly offer helpful advice as well.

If you would like some technical information regarding the installation guidelines of residential sprinklers, contact the National Fire Protection Association. Ask for NFPA 13D (1994 edition) Sprinkler Systems in One - and Two-Family Dwellings and Manufactured Homes. This is the standard by which sprinkler systems are installed. This bulletin speaks to sizing, spacing, flow rates, etc. It will allow you to judge whether or not your system is being installed properly. Note, there may be a charge for this publication.

- National Fire Protection Association  
1 Batterymarch Park  
P.O. Box 9101  
Quincy, Massachusetts 02269-9101  
1-617-770-0200 Ms. Julie Reynolds

### **Residential Fire Prevention Tips**

Many people are unaware as to how quickly a fire can reach deadly proportions. In as little as 7 - 10 minutes after ignition, a residential fire can produce carbon monoxide, smoke and temperatures that can kill within seconds. If you are asleep while the fire is in progress, you may not even have a chance to escape!!! Many people often think that fires can't happen to them. If you are one of these people, I suggest you walk or drive down to your fire department just as soon as you finish

reading this. Ask them to tell you about the most recent fatality in your neighborhood. I'll bet that you will be shocked as to how recent and how close it was to your house. Those who have a healthy respect for fire and its dangers practice fire prevention. They have evacuation plans. They are prepared. You should do the same.

Call 1-800-950-7665 just as soon as you can. It is the Fire Prevention hotline of Aetna Insurance. They will take your name & address and send you a wonderful fire prevention pamphlet - worksheet. This phone call may save your life or one of a loved one. Please do it now before you read any further. Thanks!

All of the fire prevention tips that I would speak to are mentioned in this fine pamphlet. Call for it today. It is illustrated and shows a drawing of each item they speak about. Consider giving the 1-800 number to as many people, friends, relatives, neighbors, etc. as possible. Everyone will thank you.

Also, call your local fire department. Virtually every fire department in America has a fire prevention division. They often have excellent literature as well. The fire department will, in many cases, visit your house at no charge to do a visual inspection. They will point out your problem areas. They will help you establish an evacuation plan.

Ask the fire department about explosive flashovers, backdrafts, etc. Ask them about temperatures inside of houses and rooms that are on fire. Ask them about their self-contained breathing apparatus (SCBA). Ask them about visibility (or lack thereof) in residential fires because of smoke.

Ask them about their response time in the event of a fire at your house (the elapsed time from the initial 911 call until the first truck arrives at the firescene). Ask them how long it takes to get hoses stretched and charged with water once they have arrived at your house. Make sure they are answering the questions regarding your house, NOT average response times to all fires in your city or town. After you have added up all the time, look at your watch and see just how long this period of time really is. Think. Could you survive or wait that long? How much damage will have occurred in that time period? Don't forget, these times assume that you had time to make the call before exiting the burning structure!!!  
**NOTE: FIRE DEPARTMENTS DO NOT RECOMMEND THAT YOU STAY IN THE BURNING HOUSE TO MAKE THE CALL!!!!** In the event of a fire in your home, EXIT YOUR HOUSE IMMEDIATELY and make the call from a neighbor's house!!!

### **Fire Sprinkler Manufacturers**

Consider giving these manufacturers a call. They have excellent product literature about residential fire sprinklers. You will be amazed at how attractive and effective these things really are. You can bet that when I remodel my house, i will install fire sprinklers! TC

- **Globe Fire Sprinkler Corp.**  
1-800-248-0278
- **Grinnell Fire Protection**  
1-401-941-8000
- **IntelliNet**  
1-813-434-5888
- **Star Sprinkler Corp.**  
1-800-558-5236
- **The Viking Corp.**  
1-800-968-9501

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