

Fire suppression in your home.

Q: I am embarking on a new build house. Am I required to install a sprinkler system under current building regulations?

A: In England it is not currently a requirement, however in Wales water fire protection systems are now compulsory for new build properties. It is likely that England will follow suit.

Water fire protection systems come in two forms.

- Traditional sprinkler systems
- Mist systems.

On average, by the time the fire brigade has arrived at a fire it has been burning for approximately 9 minutes. By this point the fire has reached around 830 degrees causing significant damage.

There has been a reluctance, in the past, to install sprinkler systems in domestic properties. This is due to the potential water damage and possibility of accidental activation. Water suppression systems are also perceived as costly.

Benefits of a water fire protection system:

- Rapid extinguishment of fire saving lives & property.
- Flexibility in design. A water fire protection system could have benefits for open plan and loft conversion proposals, reducing requirements for fire doors.

Mist systems:

Mist systems generally comprise of a pump (possibly located under the stairs), hoses to transfer water to the desired location and discharge nozzles fitted to the ceiling. A mist system will operate at 57 degrees, early in fire development, and quickly extinguishing the fire.

Advantages of a mist fire suppression system:

- Once activated mist is discharged from a head on the ceiling which quickly 'suffocates' the fire.
- A mist system uses 6 litres of water per minute, compared to 51 litres for a sprinkler system. This reduces water damage to a minimum.
- Mist systems reduce smoke damage by attracting the smoke molecules to the mist droplets.

Mist systems can be installed retrospectively in existing properties, however the best time to install a system is either at new build stage or during renovations to the property.

Costs to have a system fitted in your house start at approximately £2000. This includes the pump and two discharge nozzles. Additional nozzles may be recommended by the supplier and many suppliers will provide a full design and cost service. If wrapped into a build or refurbishment the cost is small.

Annual maintenance is required.

Other potential ways to protect your home from fire:

- Install and check your smoke detectors
- Install hardwired smoke and heat detectors
- Turn off electrical appliances when not in use
- Keep doors shut over night. A regular non fire rated door could, in fact, resist a fire for up to 30 minutes.
- Keep a fire blanket in the kitchen.

Although a water fire protection system is not essential it will give you peace of mind and may prevent the devastation of a home fire.



Damage of Fire after being extinguished by firefighters around 4 minutes after igniting. No mist system installed.



Fire extinguished with a mist system 2-minutes after it had started. (Slight water damage and only a small amount of fire damage).

Useful links: www.imist.com
<https://nationwidefiresprinklers.co.uk/latest-news/derbyshire-fire-rescue-demonstration/>

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