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E-Series: Water Mist Extinguishers

*E-Series: Water Mist
Extinguisher*

E-Series: Breakthrough in modern firefighting

Launch of Europe's first:

- low pressure water mist extinguisher – just 12 bar pressure
- Contains only pure water
- LPCB Approved & CE certified to EN3

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E-Series: Why is Water Mist such an attractive proposition?

E-Series: Justification

These extinguishers are *suitable for multi risk environments*. They will not be suitable to cover every class of fire in every market area but if aimed at the right sectors where safety, cleanliness and environmental concerns are at their highest they will be a winner for all parties.

E-Series: Justification



Water mist is not new and has been around for some time but we have developed *new technology* that allows us to offer these extinguishers at relatively low pressure (12 Bar) which has not been possible before.

Legislation will be an important driver and as *environmental concerns gather pace* we want to be at the forefront of any development of technology that can lead the market and protect lives and property in a safer and cleaner way.



*E-Series: Why are we
promoting Water Mist?*

E-Series: Background Drivers

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Environmental concerns continue to increase and regulation regarding disposal of products that cause environmental damage continues to sharpen.

HALON HAS ALREADY BEEN BANNED.

E-Series: Safety & Environmental

AFFF Foam contains Fluorosurfactants. Over the last Five years studies have shown that fluorinated materials generally have a detrimental impact on the environment but also on biological systems. Fluorinated material is now found in human blood and this was not the case until the late 50's. Major foam producing manufacturer 3M stopped producing foams containing PFOS (a degradation product) in 2002.

LPCB and BSI are already advising extinguisher manufacturers to reduce the levels of Fluorosurfactants in their foam extinguishers.

HOW LONG BEFORE AFFF FOAM IS BANNED?

E-Series: Safety & Environmental

C02 extinguishers are effective but have substantial drawbacks.

- highly pressurised containers (55 bar)
- static shock on delicate electronics
- Cause freeze-burn at minus 70 degrees
- Can blow burning material around
- alarmingly loud during discharge
- small discharge time

Recent issues with valves shearing accidentally also emphasises the need to find a better solution in respect of safety.

LOW PRESSURE WATER MIST IS SURELY THE SAFEST OPTION LONGER TERM

E-Series: Safety & Environmental

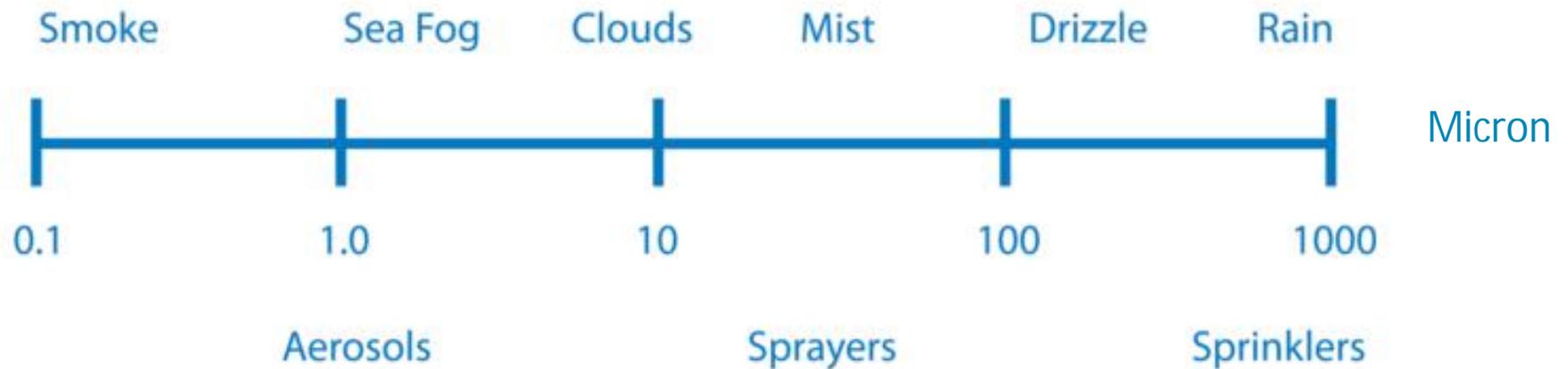
Wet Chemical Extinguishers are known to contain potassium carbonate or acetate or citrate and create a process called saponification when extinguishing fires but this process is messy and the soapy mixture goes all over the equipment and floor area leaving collateral damage that extends cleaning up time and downtime before operations can recommence.

WATER MIST MINIMISES DAMAGE SO CLEANING AND DOWNTIME CAN BE REDUCED.



*E-Series: What is Water Mist
and how does it work*

Low Pressure Mist: The Definition



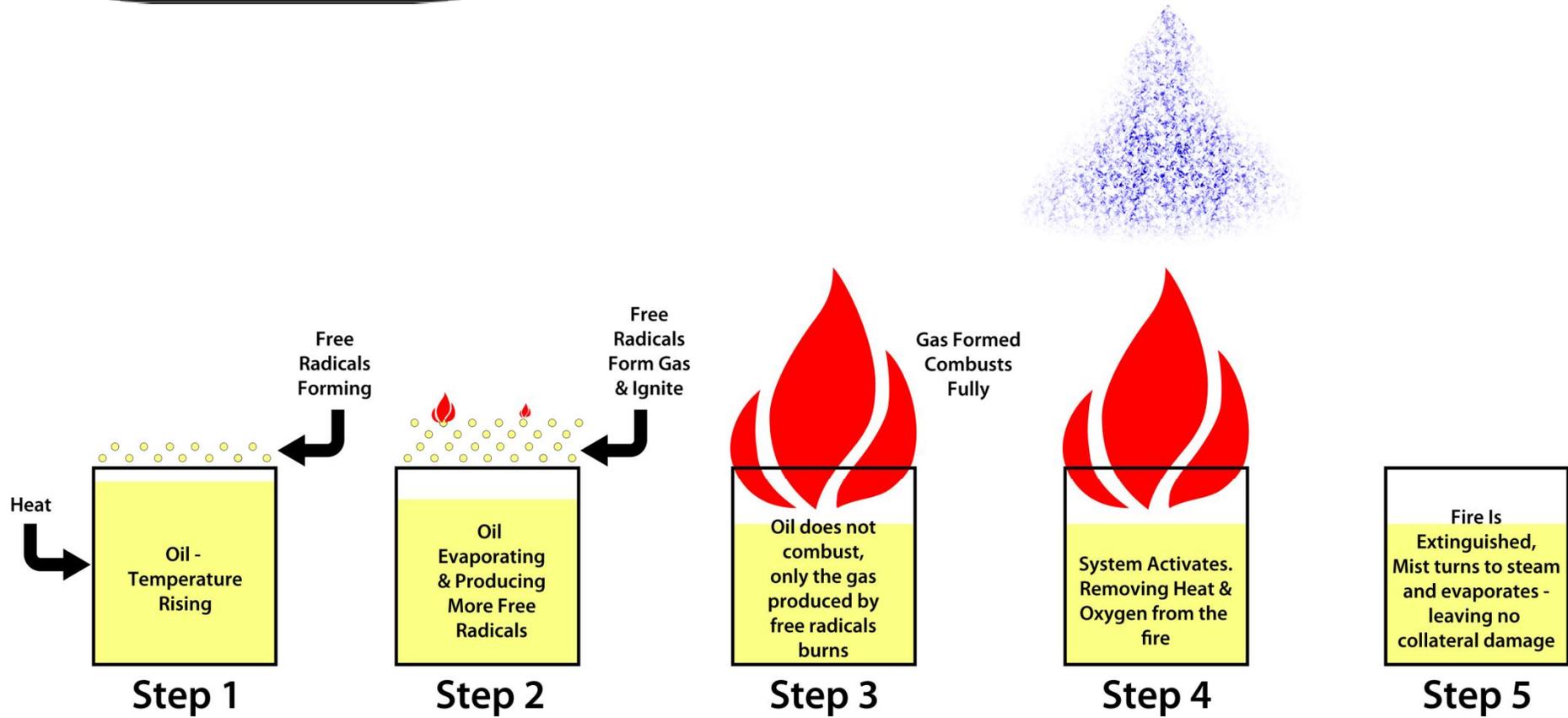
Low pressure as defined by NFPA 750.

- Low pressure is defined as below 12 Bar
- Medium Pressure is defined as 12 Bar to 60 Bar
- High pressure is defined as 60 bar +

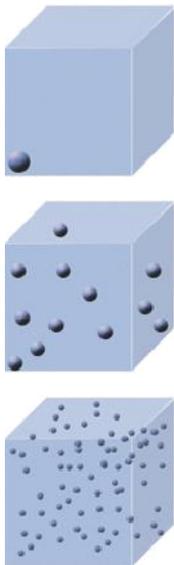
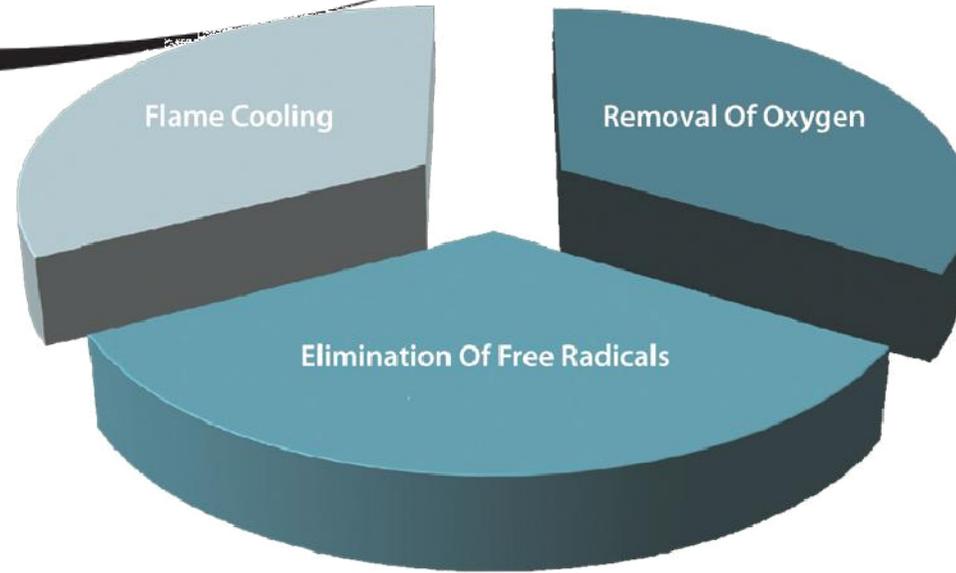
Low Pressure Water Mist

- Cooling
- Dynamic Mist (High Kinetic Energy)
- Adiabatic Cooling (Due to reduction of pressure)
- Low Volume of water used: Due to droplet size and flow rate
- Mist absorbs energy of fire

How does Mist work?



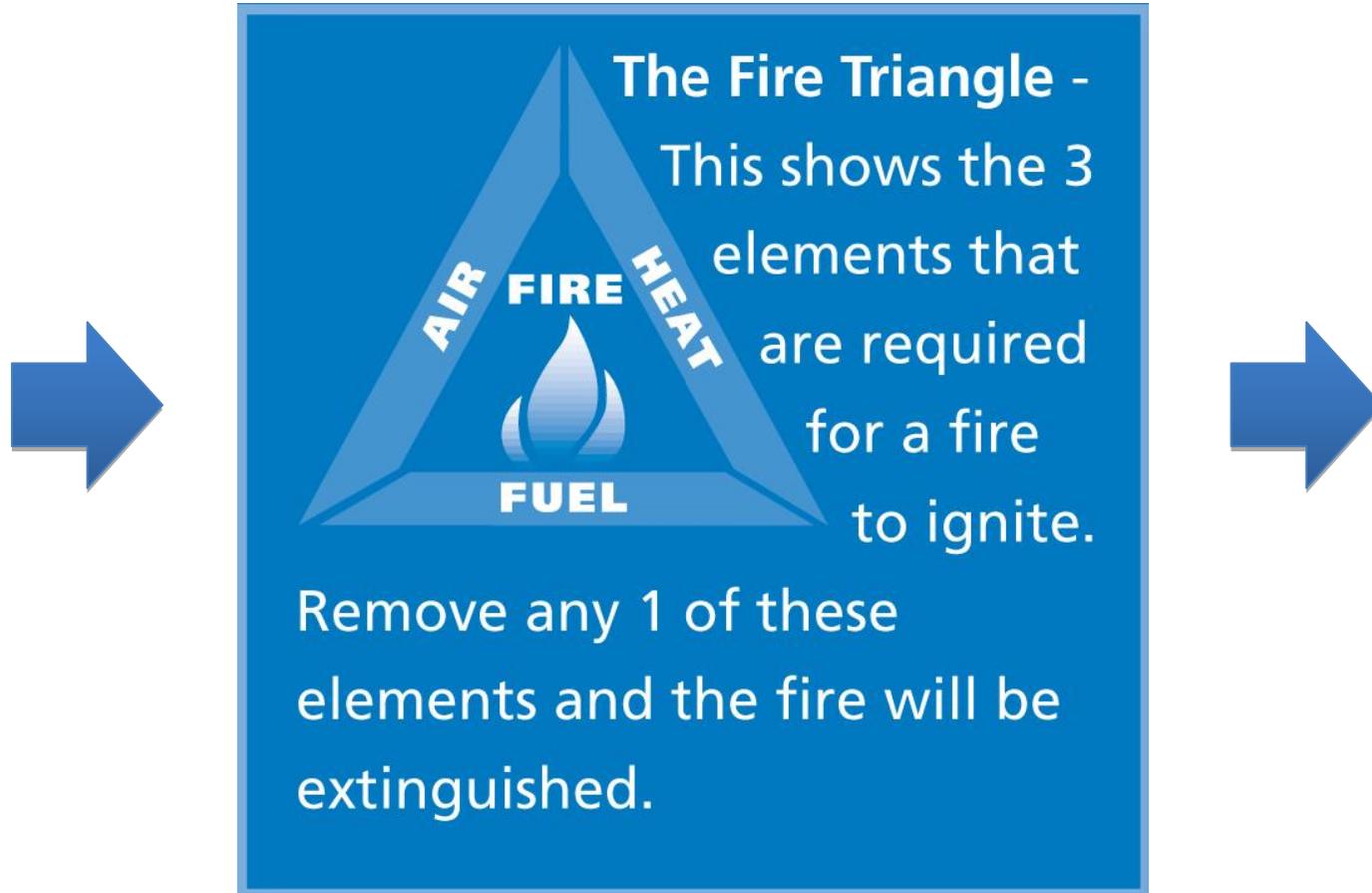
Mist Table



| Diameter Of Droplet | # of droplets in 1 liter of water | Total cross section in 1m ³ | Total Surface Area in 1m ³ |
|-----------------------|-----------------------------------|--|---------------------------------------|
| 0.12 (12cm) | 1 | 0.0125 | 0.05 |
| 0.0006 (600 Microns) | 8841941 | 2.5 | 10 |
| 0.0001 (100 Microns) | 1909859317 | 15 | 60 |
| 0.00005 (50 Microns) | 15278874537 | 30 | 120 |
| 0.000025 (25 Microns) | 122230996295 | 60 | 240 |
| 0.000015 (15 Microns) | 1909859317103 | 150 | 600 |

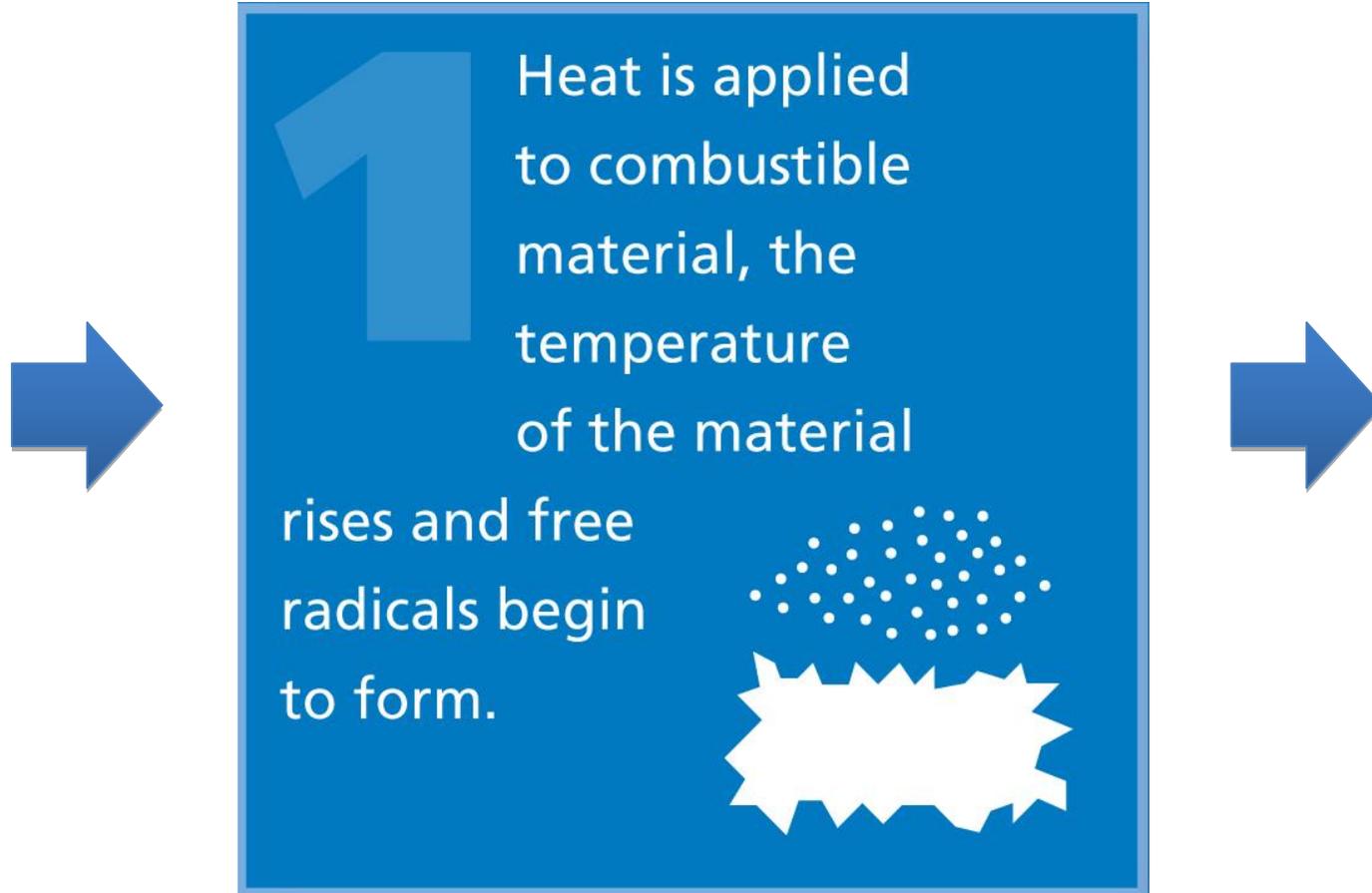
Fighting Fire With Water

How does Dry Water Mist work in the suppression and extinguishing of fires?



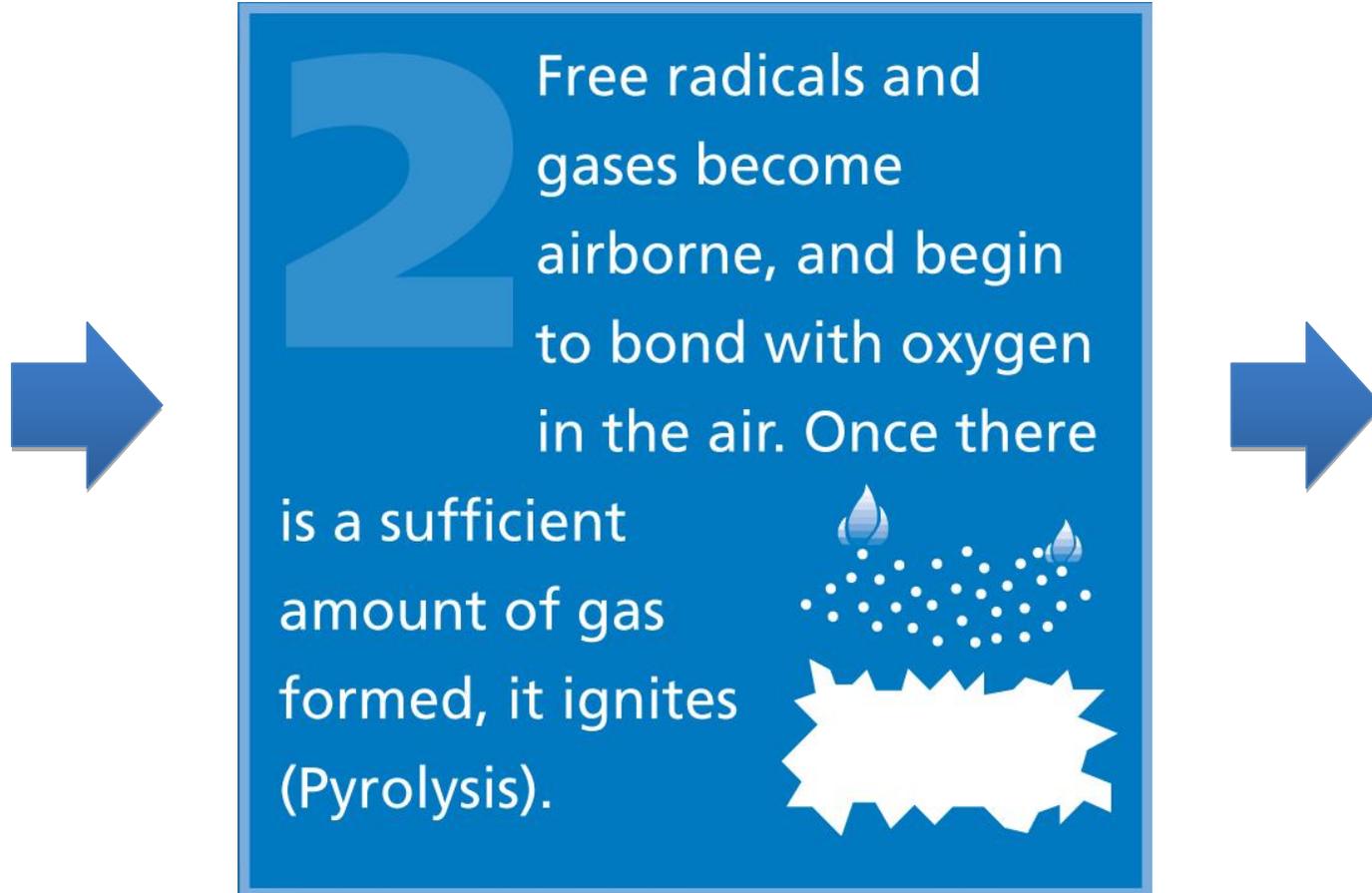
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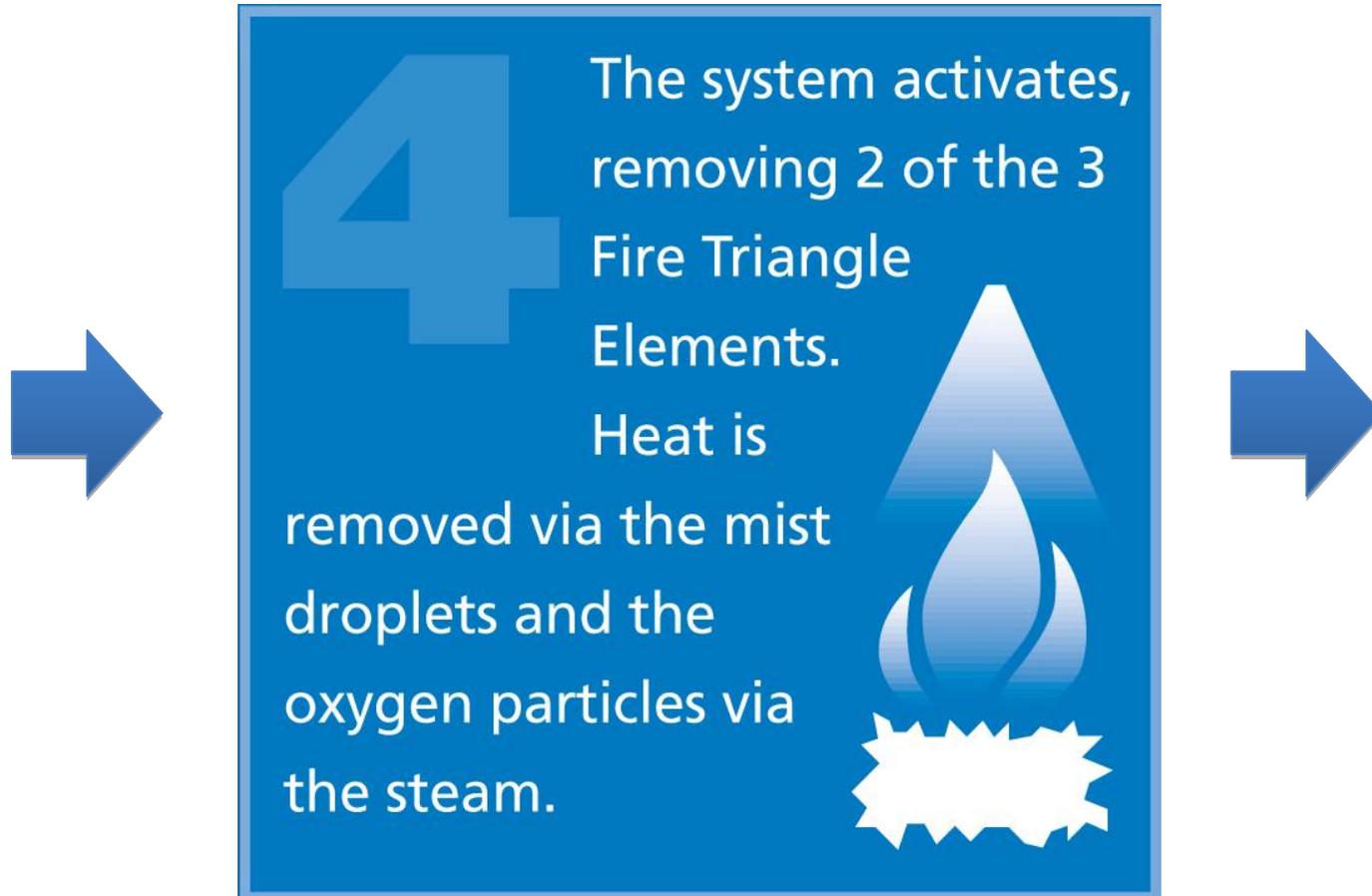
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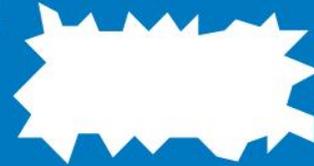
Fighting Fire With Water

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The fire is extinguished. Steam (inert) formed by the mist during extinguishing continues to evaporate, dissipating the heat and oxygen from the fire source, cooling the material to prevent re-ignition.



E-Series: Service & Maintenance Instructions

The Range



Model Numbers:

- 1 Litre Water Mist
- 3 Litre Water Mist
- 6 Litre Water Mist

E-Series: Service & Maintenance Instructions

