

Nobel fire systems

www.nobel-fire-systems.com



Kitchen Fire Suppression

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AGENDA

- **Brief intro to Nobel Fire Systems.**
- **Types of Fire suppression system medium**
- **How those mediums work.**
- **Current Standards, Approvals & Guidance notes**
- **Where are Fire Systems heading.**

Nobel Fire Systems- Who are we?

- **Nobel Fire Systems** up until January 2003 was an operating division of



We are a descendant of Sir Alfred Nobel who built the first explosives site in Scotland in 1874 and was the founder of ICI in 1926, and who's fortune was used posthumously to institute the Nobel Peace prize.

- In July 2003 Nobel Fire Systems was established as a separate company to Nobel Enterprises an operating Division of ICI.
- NFS continue to develop Fire Suppression Technologies for the UK, Europe and other world markets using “Energetics Technology”.
- **Now into our 17th Independent year of trading**



Nobel Product Portfolio

Nobel Fire Systems manufacture and distribute a wide range of Fire Suppression Systems. They include:

Nobel K-Series -	Kitchen Fire Suppression.
Nobel Galley -	Marine Kitchen Fire Suppression.
Nobel FS-Series -	Low Pressure Foam.
Nobel DC -	Dry Chemical Powder Systems.
Gaseous	Chemical & inert gas FM 200; Novec 1230; IG 55,541 etc.
Water Mist	High and low pressure self contained or pumped.
Stat-X	Condensed Aerosol Suppression.
Isolcell	Oxygen Reduction Fire Prevention System
HSSD	Very Early smoke detection systems
Detection	Specialist Fire Detection systems relative to suppression
Spark Detection	Spark detection & Explosion suppression systems
Solar PhotoVoltaic	Safety Systems PVstop

- **Fire System Types Currently Available.**

- **Fire suppression liquid-**

- Wet Chemical based systems.
- Water Mist

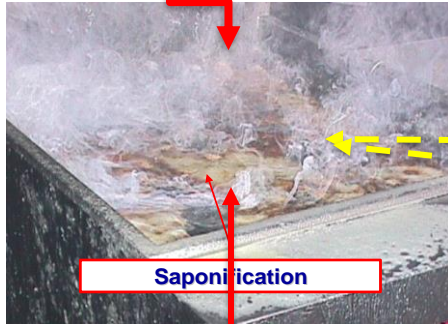
- The vast majority of Kitchen fire suppression systems world wide are Wet Chemical based.

- **WHY?**

Wet Chemical Fire Systems Use Liquid More Efficiently.

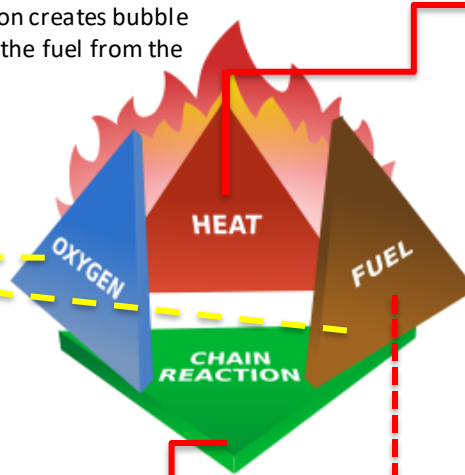
1- Primary Fire Fighting-

Chemical Interaction-
Known as "Saponification"



3- Secondary Fire Fighting-

Chemical Reaction creates bubble
mass cutting off the fuel from the
air



2- Secondary Fire Fighting-

Chemical Liquid applied as Mist to
absorb the heat and reduce the
cooking oil to below Auto Flash
point.



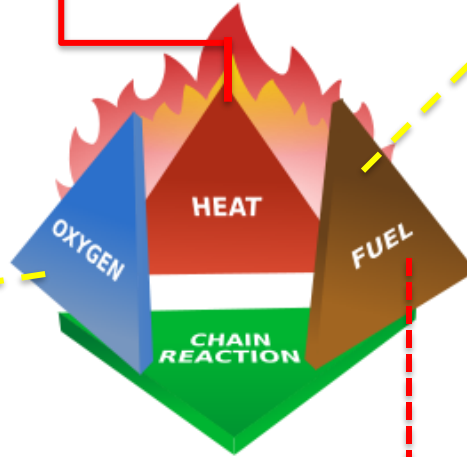
4- Secondary Fire Fighting-

Remove Fuel and shut down
Electric or Gas supplies

Water Mist Fire Systems use water efficiently but are much less effective than Wet Chemical needing more water to ensure fires are extinguished & Most importantly remain so.

1- Primary Fire Fighting-
Cooling
No Chemical reaction

2- Secondary Fire Fighting-
Due to high rate of steam production Oxygen is displaced at the surface of the oil.



No permanent barrier to air or separation from fuel

3- Secondary Fire Fighting-
Remove Fuel and shut down
Electric or Gas supplies

- **Fire Systems Types Currently Available.**

- Mechanical Systems

With high pressure cartridges, metal Fusible links, pulleys and wire ropes and plungers.

All predominantly manufactured in the USA.



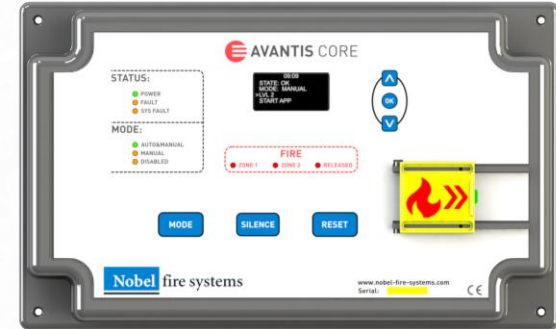
CORNER PULLEY SEAL
FAST ADAPTER



- **Fire Systems Types Currently Available.**

- All Electrical Systems

No high pressure cartridges, No mechanical moving parts. Fast & Clean
Linear heat fire detection. Fully monitored circuits. Advanced
Electronics.



Current Fire System Performance and Testing Standards.

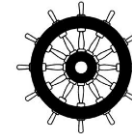
- LPS 1223 - A UK standard accepted through Europe and other countries that accept UK standards.



- UL300- A US standard accepted in UK, Europe and other countries influenced by US standards.



- ISO 15371- An International standard identical to UL 300 but aimed at International Marine applications.
Ships and Offshore



All are “PRE-ENGINEERED” system approvals.



Current Fire System Performance and Testing Standards.

These three standards provide **Independent** assessment of the Fire Systems ability to extinguish fires and to establish a quality assessment of the hardware used in the system to assure resilience, continued performance and field life safety.

Fire Performance Testing.

Equipment Performance Testing.

Typical other BS EN standards used within this are: (in LPS1223)

BS EN3

BS EN54

BS EN 12094



- **Short sample of current Guidance Documents.**
- **DW 172**
- **BS EN 16282-7**
- **HSE Guidance**
- **NFPA 17a**

**All put forward benchmark recommendations that should be seen
as the**

Minimum standard to achieve.

NONE ARE MANDATORY

Insurance Companies Expect & Ask For Compliance



All Fire Systems fitted to date are as a result of and are influenced by:

- ✓ End user or Specifier Recognition of the Risk & Responsibilities
- ✓ Business Continuity Protection
- ✓ Staff and Customer Protection
- ✓ Financial Protection
- ✓ Prior Experience of Fire Loss
- ✓ *Insurance Driven Requirement.*



Future Fire System Performance and Ongoing competency.



SP 206

**For the Design, Installation, Commissioning, Recharge
& Maintenance of Kitchen Fire
Protection Systems**

BAFE is an independent third party certification registration body that develops quality and competency schemes for the fire protection industry. Fire protection **companies** are independently certificated against these schemes for their competency to provide fire protection services by UKAS accredited Certification Bodies.

**This is a very different performance related approval than LPS, UL or ISO
It is aimed at ensuring the Company undertaking any work on the fire system is
“Competent” to do so.**



Future Fire System Performance and Ongoing competency.

To date the current fire systems approvals dictate the last nozzle in the fire system is at the entrance to the extract duct-

Fire Losses show this is insufficient in some cases-

- ✓ *Insurance Driven Requirement for “Extended duct protection”*
 - This will drive new demand for much greater and extensive Risk Assessments
 - It will drive demand to ensure not just the immediate cooking facility is protected but the Building in which it resides”



Thank you

