Fire Protection Industry (ODS & SGG) Board

FACT SHEET

Scheduled Extinguishing Agents in the Building Industry

Did you know that ozone depleting substances (ODS) and synthetic greenhouse gases (SGG) used in the Australian fire protection industry are regulated under the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (the Act) and the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 (the Regulations). The Ozone legislation is in place to:

- promote the responsible management of scheduled substances so as to minimise their impact on the atmosphere
- provide controls on the manufacture, import, export and use of SGGs under the Framework Convention on Climate Change and the Kyoto Protocol
- provide controls on the handling, use, acquisition, storage and disposal of scheduled substances
- encourage industry to replace ozone depleting substances
- ensure Australia meets its international obligations under the Montreal Protocol on Substances that Deplete the Ozone Layer and the United Nations Framework Convention on Climate Change.

Gaseous fire suppression systems using scheduled extinguishing agents are widely distributed in commercial and industrial buildings across Australia. These systems can be used to protect facilities such as:

- data centres in online businesses and elsewhere
- electrical switch and battery rooms
- telecommunications facilities
- medical apparatus rooms in hospitals
- chemical and physics laboratories
- libraries and archives
- an extensive range of manufacturing processes and control centres
- clean rooms and so on.

The types of gaseous extinguishing agents used in the building industry include:

- halocarbons (eg- FM-200; HFC-227ea),
- inert gases (eg- nitrogen, argon and nitrogen mixtures, argon, nitrogen and carbon dioxide mixtures)
- perfluoroketones (eg- Novec 1230; FK 5-1-12).

Gaseous fire extinguishing agents are referred to as clean agents because they:

- extinguish fires without collateral damage (no residues; no clean-up required)
- have the ability to extinguish shielded, obstructed or three-dimensional fires in complex building geometries
- don't conduct electricity.

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Did you know…

Discharges can occur due to:

- Human error / system not isolated.
- Equipment malfunction.
- A lack of understanding about the sensitivity of gaseous fire suppression systems or the lack of adequate maintenance.

- The most commonly used scheduled extinguishing agents are FM-200, NAF-SIII and very minimal NAF-PIII.
- FM-200 acts as a leading alternative to halon.
- FM-200 leaves no significant post discharge clean up, obscuration on discharge or damage to sensitive equipment.
- Most SGGs have very high global warming potentials (GWPs). The most common SGG used in buildings is FM-200, which has a GWP of 3,350 (meaning that it is 3,350 times as potent in the atmosphere as carbon dioxide).

Do you require a licence?

All individuals / companies in the building industry that handle any ozone depleting substances or synthetic greenhouse gases must hold the appropriate licence and/or authorisation. These are issued by the Fire Protection Industry (ODS & SGG) Board.

- Any person in the building industry who handles ozone depleting or synthetic greenhouse gas, listed in the Act, where there is a risk of emission requires the appropriate Extinguishing Agent Handling Licence(s) (EAHL)
- Any person or company who buys, stores and/or sells extinguishing agents must hold an Extinguishing Agent Trading Authorisation (EATA).

Recommendations for the Building Industry

The Board recommends the following to the building industry to increase awareness and understanding of ozone depleting substance and synthetic greenhouse gas legislative requirements. This includes the need to reduce the use of scheduled extinguishing agents and to minimise the potential risk of accidental emissions. Recommendations include:

- Technicians installing, servicing, maintaining or decommissioning systems containing scheduled extinguishing agents must hold an Extinguishing Agent Handling Licence (EAHL).
- Technicians should also keep up to date on new technologies for dealing with gaseous fire suppression systems.
- The use of log-books to record all maintenance activity. Proper documentation will provide a full life-cycle history for a particular gaseous fire suppression system. Not only will all maintenance activity be recorded but the log-books will also provide a historical record of the licence number of the technicians servicing the system.
- Regular service and maintenance of gaseous fire suppression systems. This will ensure that the systems are fully functional in the event of a fire and will ensure the safety of those working in the area.

Contact the Board or find out more about the fire protection industry permit scheme?

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