



REPORT

International Organisation for Standardisation ISO 14520 – 5, 6, 8 and 9

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In the previous issue of GasBag we looked briefly at International Standard ISO 14520 Part 1 – General Requirements, Gaseous fire extinguishing systems - Physical properties and system design. In this issue we discuss agent-specific Parts 5, 6, 8 and 9. These deal with:

- Part 5: FK 5-1-12 extinguishant (Novec 1230)
- Part 6: HCFC Blend A extinguishant (NAF S-III)
- Part 8: HFC 125 extinguishant (FE-25)
- Part 9: HFC 227 extinguishant (FM-200).

Each is structurally similar. Taking Part 9, HFC 227 extinguishant, as a typical example, the main features include:

- It is linked to the parent document, ISO 14520-1 (Part 1: General requirements) and covers physical properties, specification data, usage and safety aspects and is applicable to systems operation at nominal pressures of 25 bar and 42 bar super-pressurised with nitrogen.
- It notes that HFC 227 is a colourless, almost odourless (HCFC Blend A has a citrus-like odour), electrically non-conductive gas with a density approximately six times that of air (the density of HFC 125 is about four times that of air, while that of FK-5-1-12 and HCFC Blend A is eleven times that of air). It extinguishes fire mainly by physical means but also by some chemical means.
- Table 3 details extinguishant requirements per volume of protected space for various design concentrations and temperatures ranging from minus 10 to 100 degrees C. Extinguishing and design concentrations for various fuels are given in Tables 4, 5 and 6. To view tables please visit the International Organisation for Standardisation website: www.iso.org/iso/home.html and follow the links to ISO 14520.



- In the case of Part 6 (HCFC Blend A) table 4 details extinguishant requirements per volume of protected space and temperatures ranging from minus 35 to 95 degrees C. Extinguishment, inerting and design concentrations for various fuels are given in tables 5 and 6. To view tables please visit the International Organisation for Standardisation website: www.iso.org/iso/home.html and follow the links to ISO 14520.
- It addresses the safety of personnel, pointing out the hazards that may arise from the extinguishant itself, the products of combustion and breakdown products of the extinguishant resulting from exposure to fire. Toxicological information includes ALC (approximate lethal concentration), NOAEL (no observed adverse effect level) and LOAEL (lowest observed adverse effect level).
- Storage container maximum fill density (kilograms per cubic metre), maximum container working pressure (bar absolute) values are provided for nitrogen super-pressurisations of 25 and 42 bar (at 21 degrees C), together with supporting temperature / pressure charts.

As we have noted before, these agent-specific parts of ISO 14520 contain a wealth of technical information!

A copy of the standard can be purchased through SAI Global ([Click here](#)) or visit SAI Global's website: <http://infostore.saiglobal.com/store/>

