



## i3™ Inert Gas

### Fire Suppression Technology

#### Features:

- Fast acting
- No environmental impact
- Low life cycle cost
- Electrically non-conductive
- Zero breakdown products
- No risk of consequential damage
- VdS approval

#### Applications

- Computer suites
- Telecoms facilities
- Archive stores
- Petrochem facilities
- Offshore
- Gas turbines
- Power generation

With all the benefits of Halon and none of its environmental disadvantages, Tyco i3™ Inert Gas Fire Protection is the answer where there is a need for a clean fire suppression agent that is non-toxic, non-corrosive, odourless, leaves no residue and has a smaller footprint than traditional low pressure technology.

One of the crucial features of i3™ is that, in environmental terms, it brings nothing new (and thus potentially damaging) to the atmosphere. It comprises a pure 50:50 mixture of two gases which occur naturally, Argon and Nitrogen. What is more, because the blended component gases have a density similar to that of air, the mixture is able to retain its concentration in the risk area for far longer than Halon.

In today's sensitive political environment, i3™ meets important criteria, with no global warming or ozone depleting potential. Because it is inert, it forms no breakdown products thereby minimising the risk of consequential damage.

It is, in short, an acceptable alternative to HFC's, being safe to use in occupied areas and with the benefit of having been recognised by regulatory bodies around the world.

*a vital part of your world*

**tyco**  
Fire & Integrated  
Solutions

## SPECIFICATIONS

### Efficient & Rapid

An i3™ Inert Gas Fire Protection System is effective against virtually all combustible materials and flammable liquid fires and is an ideal choice in situations where an environmentally acceptable agent is mandatory. In a closed space, tests and experience confirm that almost every fire will be extinguished quickly and effectively.

### Delivering Results

i3™ extinguishes fires by reducing the ambient concentration level of oxygen in the risk area between 10 % and 14%. Because oxygen concentrations below 14% are insufficient to support combustion, fire is extinguished. However, oxygen concentrations at these levels are enough to support life for a short period, making i3™ safe to use in occupied spaces. As a result, typical applications include manned areas such as computer centres and telecoms installations. In these and other instances, i3™ is stored as a gas in high pressure containers filled at a pressure of 300bar.

### Future Perfect

Practically everything we do has some impact on the world about us, but i3™ is quite different. Its constituent gases already circulate freely in the atmosphere, so this friendly fire protection solution neither adds to the environment, nor takes anything away. Containing no bromine or chlorine, i3™ has zero ozone depletion potential and with a global warming index of 0, this agent has no impact of any kind on climate change. Furthermore, i3™ delivers no toxins or odours, leaves no residue and is non-corrosive. In a world where long-term corporate responsibility has to be taken more seriously than ever before, i3™ Inert Gas Fire Protection is a wise choice.

### System Description

i3™ Inert Gas Fire Protection is a total flood suppression system designed to extinguish fires involving flammable liquids, gases and electrical equipment.

Systems comprise one or more containers connected to a system of pipework and nozzles. i3™ is stored under pressure in steel containers, each fitted with a valve designed to allow its contents to discharge rapidly. When the valve opens, i3™ flows into the distribution pipework to nozzles from which it discharges as an invisible gas without obscuring vision.

i3™ is particularly valuable in extinguishing fires in enclosures containing hazards or equipment where a clean, electrically non-conductive medium is essential or where the cleaning up of foam, water or powder would be problematic.

### Storage & Distribution

The system provides a typical design concentration of 40% by volume for Computer Rooms. Class B and C hazards require separate consideration and the design concentration selected must be specific to the hazard and adjusted for temperature and altitude, if appropriate.

Each system has its own supply of i3™ clean agent, which can be augmented by a duplicate bank of cylinders connected by a common manifold.

System design is fully engineered using i3™ flow calculation software.

Systems are designed in accordance with manufacturers' guidelines, which are based upon ISO 14520 - Gaseous Fire Extinguishing systems.

i3™ is stored in containers with a capacity of 27L, 40L, 67L and 80L with an operating pressure of 300 bar. Containers are manufactured to meet 96/36/EC (TPED) and are pressure tested to 450 bar.

The i3™ container is fitted with a rapid action valve designed to be operated by a 24v DC solenoid, pneumatic and/or local manual actuator.

Each container has a pressure gauge and optional low-pressure switch to provide visual and electrical supervision of the container pressure. The low-pressure switch provides an electrical indication in the event of a loss of container pressure exceeding 10%. The pressure gauge is scaled to provide an easy, visible indication of container pressure.

A safety burst disc is incorporated in the valve and is designed to rupture at approximately 420 bar, venting safely through a recoil cap.

Total flooding nozzles are designed to uniformly distribute i3™ throughout the protected area and are drilled to suit the individual design requirements. Nozzles are provided in brass as standard.

### Tyco i3™ Inert Gas Fire Protection

*superior protection for equipment  
and plant, yet safe in occupied spaces*



For further information on how we can help you, please visit our website at [www.tycofis.com](http://www.tycofis.com) or e-mail us on [tfis.fda.uk@tycoint.com](mailto:tfis.fda.uk@tycoint.com). The right is reserved to modify or withdraw any product or service without notice. PSF 143TFIS Issue 1 April 2006© 2006

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