INERT-SIEX (Argon) IG-01

"Extinguishing agent present in the air we breath"

INERT-SIEX system uses argon as extinguishing agent. Argon is an inert gas that is naturally prevalent in the atmosphere, it is nonconductive, colorless, odorless, insipid and chemically neutral. This gas is safe for human health, non toxic, and it does not produce corrosive or hazardous residues.

Completely ecological, with zero global warming potential

Highly recommended product for long piping networks

The fire suppression industry must be responsible with the environment. The argon gas is completely ecological, with zero ozone depletion potential (ODP) and global warming potential (GWP). This allows us to perform real tests, without any environmental damage.

This system extinguishes fire by lowering the oxigen level in the protected area enough to make combustion unsustainable. Although is the same extinguishing system as the CO_2, the argon gas is safe to be used in occupied areas. In most of the cases, the fires are extinguished when the oxigen level is reduced from 21% to 14%. Regarding the oxigen reduction, different scales will be considered depending on the type of risk. After an argon gas discharge, the visibility is good. In case of a system activation in an occupied area, the emergency exits remain clear, avoiding possible panic in case of reduced visibility.

The argon is stored as compressed gas in high pressure cylinders. SIEX provides two different systems denpending on the storage pressure.

INERT-SIEX 200. 80 and 140 litres cylinders manufactured under CE standards for a working pressure of 200 bar and testing pressure of 300 bar (filled with 16.8 m^3 and 29.4 m^3 of argon).

INERT-SIEX 300. 80 litres cylinders manufactured under CE standards for a working pressure of 300 bar and testing pressure of 450 bar (filled with 23.8 m^3 of argon).

It is possible to use long piping networks due to its high storage pressure, so the cylinders can be located far from the protected risk, keeping the decoration intact. Although the initial pressure is very high, we can achieve a pressure reduction to 60 bar using a gauged restrictor, so the pressure in the piping is below 60 bar.

The **SIEX-MAM-20** forged brass valves are 100% tested and manufactured according to EN 12165:98 and following the most strict quality standards. Its design, unique in the market, offers an easy refill and a combination of actuators that covers all the requirements.

With this extinguishing agent, directional valves are used as standard to protect several risks at the same time, reducing the cost of the equipment. The sizes of the directional valves supplied by SIEX may vary from 3/4" to 4" and they are designed for a nominal pressure of 250 bar. These valves are easy opening, full bore and minimum pressure loss.

Argon physical characteristics

Chemical formula	**Ar**
Molecular weight	**40**
Boiling point at 1.013 bar	**-186ºC**
Fusion temperature	**-189ºC**
Critical temperature	**-122.29ºC**
Critical pressure	**48.64 bar**
Presión crítica	**48.36 bar**
Gas relative density (air =1)	**1.38 a 17ºC**
Liquid relative density (water = 1)	**1.4 a–185.86ºC**
Solubility in water	**34 cm^3/l a 20ºC**
Flood factor for heptane at 20ºC	**0.647 m^3/m^3**
Design concentration (for Class A surface)	**38%**
Flood factor (for Class A surface)	**0.478 m^3/m^3**
NOAEL	**43%**
LOAEL	**52%**
Ozone Depletion Potential	**0**
Global Warming Potential	**0**
Recommended piping	**Schedule 80/120/160**

Possibility to work at 200 or 300 bar:

INERT-SIEX-200bar
INERT-SIEX-300bar

For more information:

General characteristics

- ***Easy acquisition all over the world***
- ***Inexpensive refills*** *(cheap extinguising agent)*
- ***Allows long piping network***
- ***Excellent visibility after discharge***
- ***Economical saving using directional valves***
- ***Long term alternative***
- ***Suitable for ocuppied areas***
- ***Zero ozone depletion potential and global warming potential***
- ***Approved standards:***
  ISO14520, UNE23575, NFPA2001, CEA4008 (CEPREVEN).

Applications

Argon is suitable for:

- ***Class A fires:*** *wood, paper, cloth, etc.*
- ***Class B fires:*** *flammable liquids*
- ***Electrical equipments, etc.***

SIEX

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