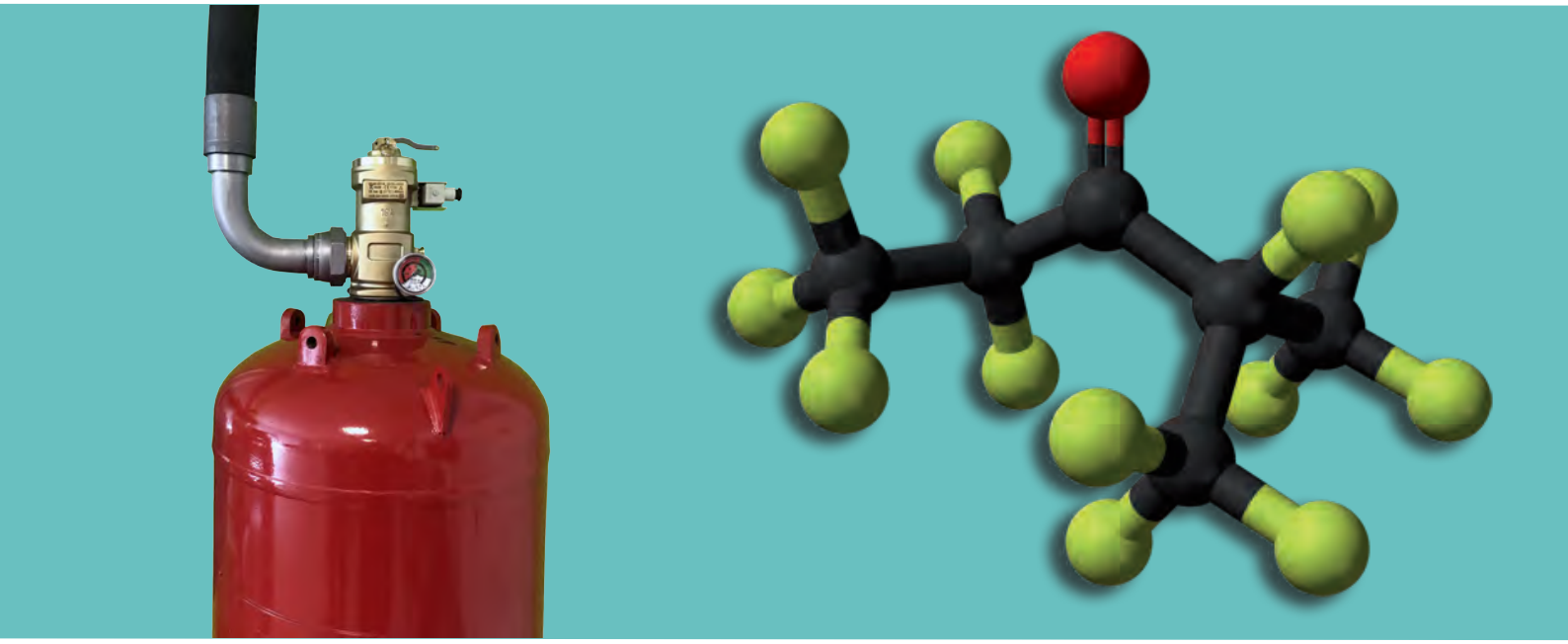
aguilera extinción

Fire Extinguishing

MH5112® (FK-5-1-12) FLUID FOR FIRE PROTECTION

Systems at 42 bar

Systems at 25 bar



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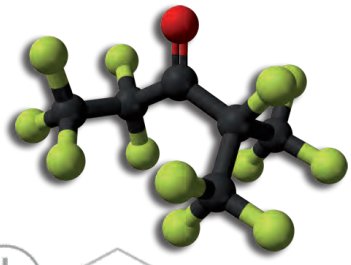
What is the MH5112®?



The clean agent MH5112®, FK-5-1-12 according to international standards NFPA 2001, EN 15004-1 and EN 15004-2, is a fluorinated ketone (fluoroketone) with chemical structure CF3CF2C(O)CF(CF3) 2, which has excellent performance as a fire extinguishing gas.

MH5112® is a colorless and odorless fluid, it remains in liquid phase at room temperature and pressure, which offers a number of important advantages:

- Low toxicity with a wide safety margin against other halocarbon agents.
- It is not a conductor of electricity,
- It is not corrosive,
- Evaporates quickly, 50 times faster than water and leaves no residue

Which make it particularly useful in the protection of computer rooms, data processing rooms, telecommunication facilities, industrial processing areas, petrochemicals, chemical storage, archives, museums...

Application Systems

Full flood

MH5112® is stored in cylinders pressurized with nitrogen at working pressures of 25 and 42 bar, so that, by discharging into the protected enclosure, the required extinction concentration is reached. The system is connected to a network of distribution pipes and a series of discharge and gasification diffusers that distribute the extinguishing agent inside the enclosure.

To ensure the effectiveness of the extinction, the design concentration must be reached, as well as a residence time of at least 10 minutes, so it is necessary to guarantee a high level of tightness in the enclosure.

Types of systems

Modular systems

Composed of a single bottle with a small network of pipes and a minimum number of diffusers through which the extinguishing agent is discharged homogeneously within the area to be protected.

centralized systems

Composed of a set of storage bottles with the same pressure and quantity of extinguishing agent, connected by a common collector to a piped distribution network and a series of diffusers suitably distributed and sized so that the extinguishing agent is distributed evenly.

Types of fires

Shallow fires

Fires involving flammable liquids and vapors that are extinguished by total flooding of the enclosure with a concentration of extinguishing agent according to each material and the volume of the enclosure.

Deep fires

Fires of flammable solids such as cotton, cardboard, paper, wood, electrical material,... that require a longer period of cooling and maintenance of the extinguishing environment.

Environment	
Reduction potential of Ozone (ODP)	0,0
potential of global warming	1
Atmospheric shelf life (years)	0,014
SNAP	Si

Security	
Concentration of use	4-6%
NOAEL	10%
Margin of safety	67-150%

Safety and sustainability

MH5112® Fire Protection Fluid's favorable environmental profile, low toxicity characteristics and excellent performance make it the ideal solution as a replacement for halon and as an alternative to other unsustainable technologies.

Appropriate for use in occupied spaces, MH5112® fluid can be effectively applied in ducting, flooding, blanketing and explosion suppression installations in all areas. Its vaporization is very fast during discharge, in addition to being non-corrosive and non-conductive, so that it does not damage material or personal property. It is a clean fluid that leaves no residue and allows normal operation to continue after extinction.

Advantages

Ozone depletion potential to zero.
Global warming potential 1.
Not restricted by the Kyoto protocol.
Rapid extinction.
Save space and weight.
Possibility of filling in situ.
Widest safety margin on the market today.
Viable and sustainable long-term technology.
Ease of recharging and maintenance.

Typical Physical Properties (Not for specification purposes)

Chemical formula	$CF_3CF_2C(O)CF(CF_3)_2$
Molecular weight	316,04
Boiling point at 1 atm	49,2ºC (120,6ºF)
Freezing point	-108ºC (-162,4ºF)
Density liquid sat. 25ºC	1,60 g/ml (99,9 lbm/ft3)
Gas density at 1 atm 25ºC	0,0136 g/ml (0,851lbm/ft3)
Specific volume at 1 atm 25ºC	0,0733 m^3/Kg (1,175 ft3/lb)
Liquid viscosity at 0ºC/25ºC	0,56/0,39 centistoke
Heat of vaporization in PE	88,1 Kj/Kg (37,9 BTU/lb)
Solubility of H2O in NovecTM 1230 fluid	<0,001% en peso
Vapor pressure at 25ºC	0,40 bar (5,85 psig)
Dielectric strength in relation to N2 at 25ºC	2,3

MH5112® 25 bar/42 bar

Pressurized systems are available at 25 bar and 42 bar depending on the needs of the installation. The 25 bar systems use large capacity welded cylinders: 150 and 240 L The 42 bar systems use seamless cylinders with capacities between 5 L and 120 L allowing for greater piping distances.

Autonomous cylinders with or without continuous weighing

High pressure cylinders, made of welded heat-treated alloy steel (according to European Directive 84/525/CEE). Marked π. 25 bar working pressure, service temperature from -20ºC to +50ºC, painted red (RAL 3002)

Equipped with:

- 2 1/2" discharge valve with built-in solenoid. CE and VdS certified.
- Manual actuator. CE and VdS certified.
- Manometer with pressure switch. CE and VdS certified.
- Fittings for wall fixing.
- Protection hood for transport.

Centralized systems with or without continuous weighing

High pressure batteries formed by cylinders of 67, 80 and 120L capacity each. Made of heat-treated steel without welding (according to European Directive 84/525/CEE). Marked π. Working pressure 42 bar, test pressure 250 bar, service temperature from -20 ºC to + 50 ºC. Engraved and painted in red (RAL 3002).

Equipped with:

- Discharge valve. CE marked according to RD: 769/1999 Includes:
- Trigger solenoid (24V power supply and 500mA consumption) (Pilot cylinder)
- Manual actuator (Pilot cylinder).
- Overpressure valve and safety disc.
- Relief valve
- 42 bar pressure gauge with Vds certified pressure switch.
- Hoses for pneumatic triggering and discharge hoses.
- Discharge collector (diameter based on hydraulic calculation).
- Check valves.
- Assembled on a metal frame with a double fixing crossbar.
- Frames are manufactured for mounting cylinders in one or two rows.

de un vistazo

Directional valves

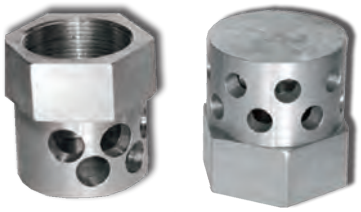
Directional valves certified according to the UNE EN 12094-5 standard. Useful for protecting various risks by means of a single extinguishing system, whether it is an autonomous cylinder or a battery of cylinders, they are manufactured in different sizes depending on the flow rates required: 1 1/4", 2", 3" and 4" .

Pneumatic actuation is carried out by means of a propellant pilot bottle and a trigger system, designed according to the risk to be protected for 2 or 3 directional valves.

Both the pilot bottle and the firing system can work in automatic or manual mode. Activation causes the propellant agent to exit towards the corresponding directional valve, causing it to open and the battery to discharge. With this configuration we guarantee that the opening of the directional valve occurs with the valve empty and that when the extinguishing agent is discharged, the directional valve is in the open position.

Diffusers

The diffusers are designed to control the flow and distribution of the product in the protected area.



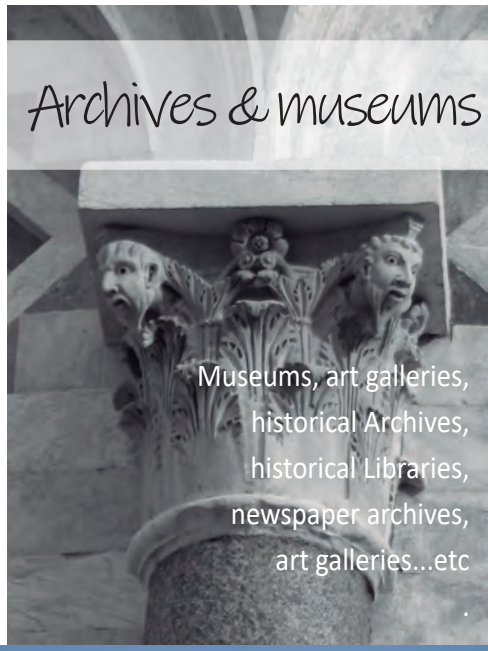
They are made of aluminum and in three sizes: 1", 1 1/2" and 2" with a selection of holes designed to provide the right speed to distribute the agent in the area of risk, about 180º and 7 holes for distribution. lateral and others at 360º with 16 holes for radial distribution.

Continuous weighing system

The continuous weighing system has been developed and patented by the R&D department of Aguilera Electrónica, it is based on strain gauge traction load cell technology and electronic circuit, with microprocessor and display.

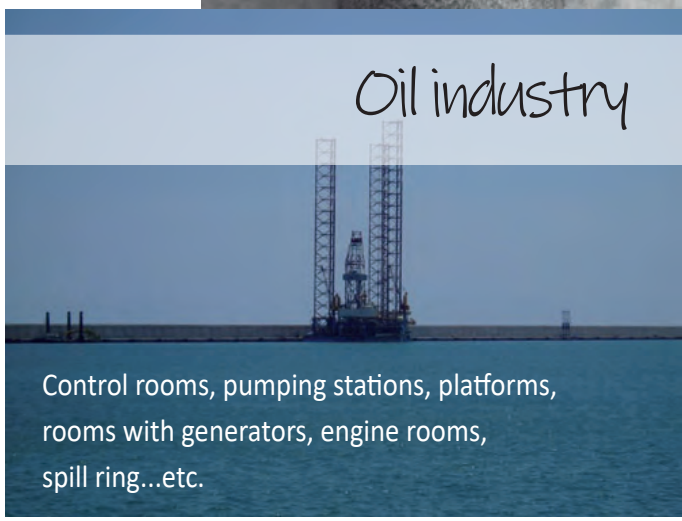
The display marks the weight of the bottle (tare + load). By means of acoustic and luminous alarms, it allows the detection of weight loss from 200 grams, faults in the equipment and signals from other weighing control equipment connected to it.

MH5112®

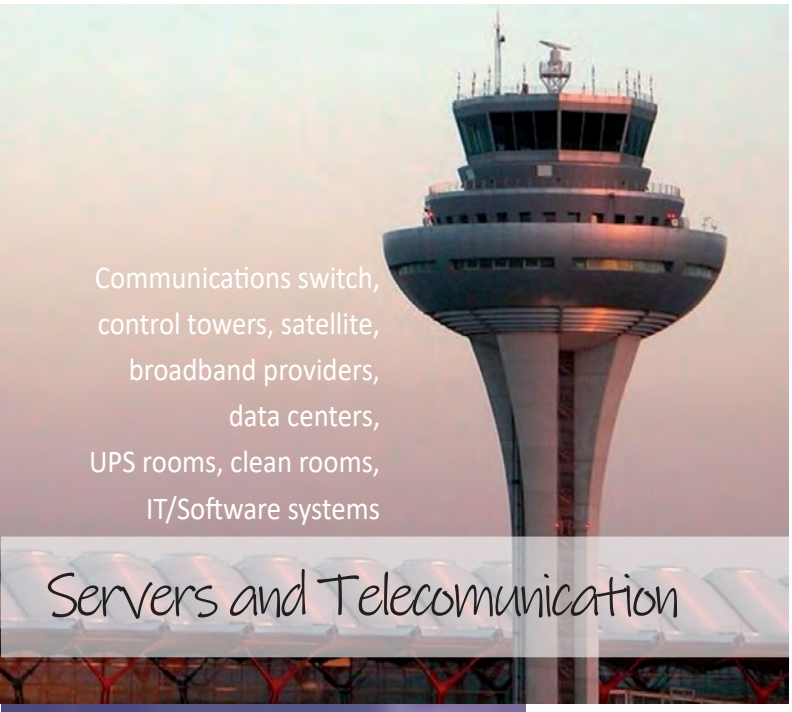


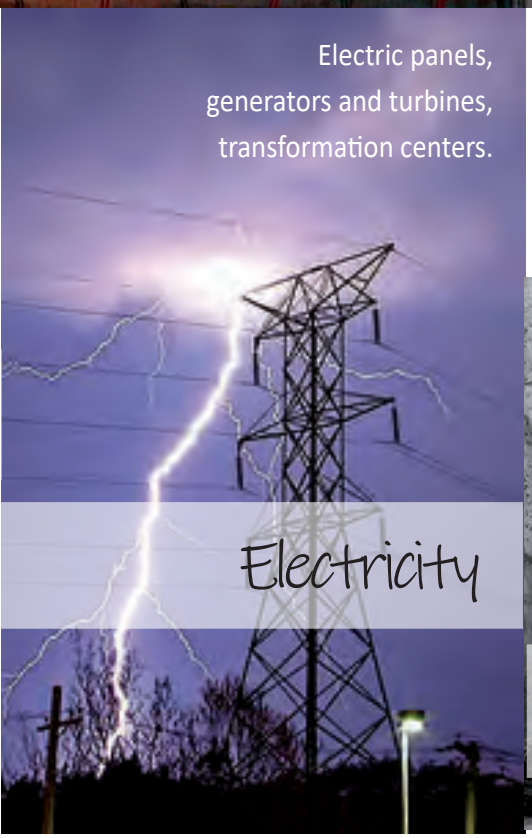
Applications

MH5112® is the fire protection fluid that sets a new standard. The fire protection fluid's environmentally favorable environmental profile, low toxicity characteristics and excellent performance make it the perfect solution as a halon replacement. Appropriate for use in occupied spaces, MH5112® fluid can be effectively applied in all installations.



MH5112®


Communications switch,
control towers, satellite,
broadband providers,
data centers,
UPS rooms, clean rooms,
IT/Software systems
Servers and Telecomunication


Electric panels,
generators and turbines,
transformation centers.
Electricity


Ground transportation,
trains and stations,
battle tanks, planes,
merchant ships,
ships...etc
Transport and military industry


created for life

Our commitment: services and guarantees

Projects

The Aguilera Group offers its collaboration to engineering companies in fire detection, control and extinction projects, advising on the systems and coverage for each building. The projects department carries out the design and dimensioning of the system, the hydraulic calculations, the calibration of the diffusers and the installation isometric, advising on the effectiveness of the equipment in each risk and considering the operability in the maneuvers.

Training

Aware that we all want to know and control what we do, regardless of the technical support we provide to the installations that run with our products, the Aguilera Group offers training courses on the operation of our equipment, its installation and programming.

Personal attention

At the Aguilera Group, each client is important. We are aware that not all of us have the same needs. For this reason, our team of professionals provides personal attention tailored to your requirements.

Maintenance

The Aguilera Group undertakes to guarantee the repair, reprogramming and supply of original spare parts after the warranty period.

Technical service

With the aim of guaranteeing the proper functioning of the facilities, the Aguilera Group's technical department advises on the operation tests and start-up of the equipment, in addition to collaborating with the installer in all phases of the work.

Equipment Warranty

The Aguilera Group guarantees the proper functioning of its equipment for 2 years from the date of delivery; We are responsible for the replacement or repair of those in which anomalies or manufacturing defects are observed and are delivered to our factory in Madrid.

GRUPO aguilera

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