



**SIEX**<sup>55</sup>

FIXED EXTINGUISHING SYSTEM

with ARGON and NITROGEN  
EXTINGUISHING AGENT

**300**BAR

FIRE  
PROTECTION

# TOTAL SAFETY



Fire protection finds a great ally in IG-55. This agent combines adaptability to each project with excellent firefighting capacity, proven effectiveness and environmental friendliness.

Companies, institutions and even individuals need to effectively protect their assets and people against the destructiveness of fire. Rapid extinguishing is essential if what is protected has great value, preventing damage that could seriously affect the activity carried out, temporarily or indefinitely disrupting productivity, and even saving lives.

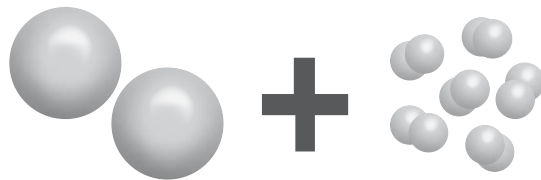
The INERT-SIEX™ 55 system has been developed to meet this demand. It uses an inert, clean, safe and environmentally friendly agent which ensures continuous and effective protection of property and occupants.

It adapts perfectly to the problems of each project while being completely environmentally friendly and pollution-free.

We are committed to ensuring this effectiveness, which is why we rely on the most complete and advanced system.

# IG-55, EFFECTIVE AT ALL LEVELS

IG-55 agent is a 50/50 blend of nitrogen and argon. It combines effective action against fire with the flexibility required for any functional need and hazard configuration, protecting staff at all times.



50% ARGON

50% NITROGEN

It is **VERSATILE**, protecting the entire enclosure of a variety of hazards, thanks to its blend of gases. Nitrogen tends to settle in the middle and top of a room, while argon settles towards the bottom. Both gases spread out to fully cover the protected area, occupying any gap.

It is **EFFECTIVE** and **SAFE**, with superb extinguishing capability. It does not interact with equipment due to its inert nature, focusing all its effects on combating the fire. It is compatible with standard construction materials and ensures successful and safe evacuation of occupants.

Since the gas is extracted from the atmosphere, it is 100% **ENVIRONMENTALLY FRIENDLY**: it does not deplete the ozone layer (ODP) and has zero global-warming potential (GWP). It is **CLEAN**: it dissipates quickly with simple ventilation and does not generate residue. It is recommended for protecting fragile and sensitive objects.



# CYLINDERS AT 300 BAR

SIEX offers the widest range of cylinders in the market. This allows optimizing the design for using only the necessary amount of agent, thus minimizing the cost of installation. This, coupled with its large capacity and filling density, results in a more compact and cost-effective system.

Cylinders can be used in a modular arrangement (a single cylinder) or in cylinder banks (multiple cylinders), depending on the installation requirements, thus allowing a fully flexible and adaptable design for any hazard, regardless of size.

The cylinders meet the most relevant international standards, both European and American, thus ensuring their safety and suitability

to be transported and installed in any location. All units are also hydrostatically tested to ensure the total quality and safety of SIEX products.

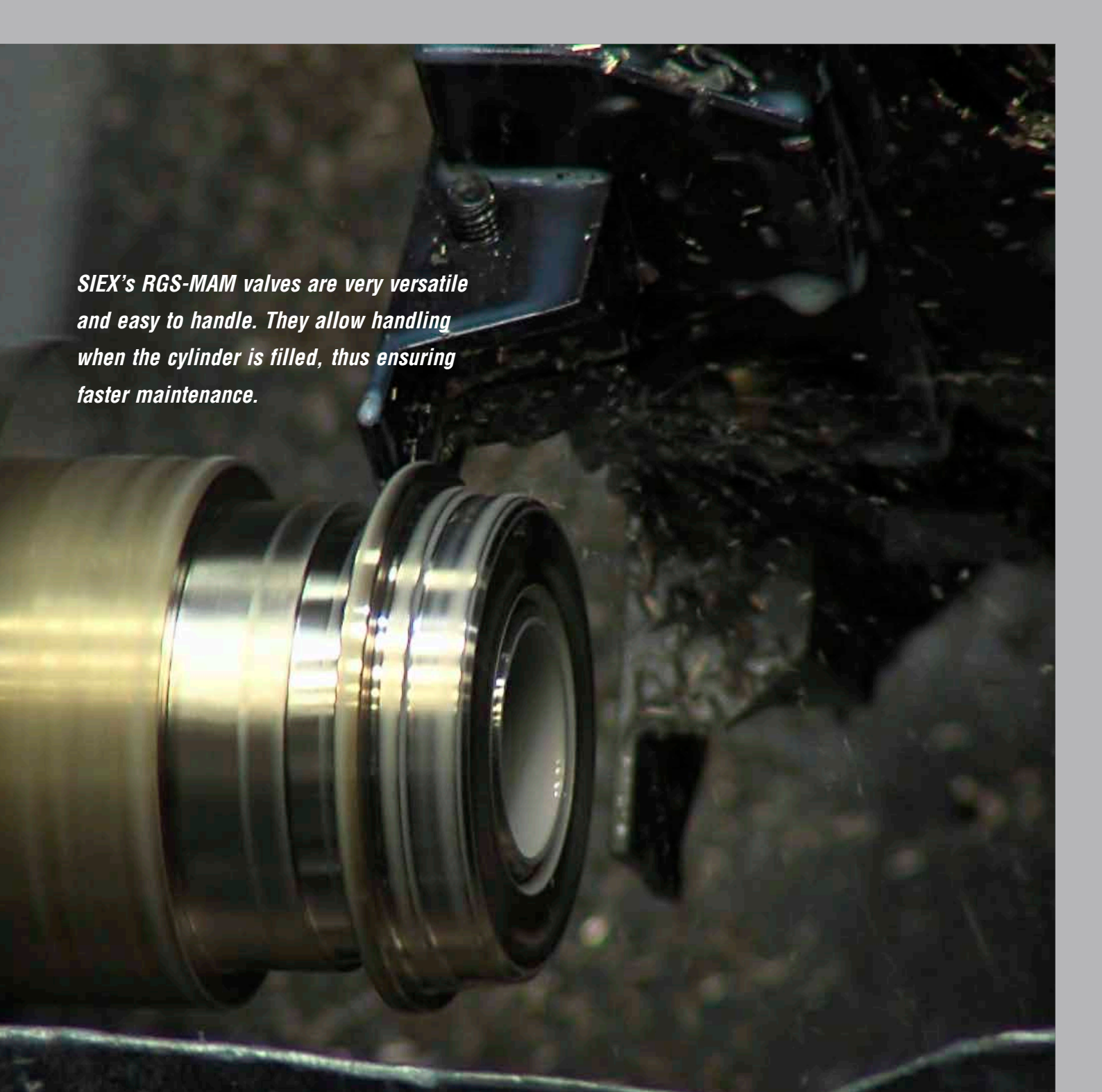
They are made of seamless carbon steel and feature a corrosion-proof coating to prevent damage even in the harshest environments. They are fitted with a protective cap that protects the valve-cylinder assembly during transport and handling. Since the agent is stored in gaseous state, the assembly does not require a siphon tube.

Different types of fittings supplied by SIEX make the system easy to install in any possible location. It can be mounted in the most

appropriate arrangement based on available space. Moreover, they have been designed and developed for a very broad range of operating temperatures. The assembly can be used in enclosures with expected minimum temperatures of -20 °C and maximum temperatures of +50 °C.

300 BAR			
Cylinder	Load IG-55	Valve	Hose
80 litres	22.30 m <sup>3</sup>	RGS-MAM-12-3	Model FH-20A
140 litres	39.10 m <sup>3</sup>		





*SIEX's RGS-MAM valves are very versatile and easy to handle. They allow handling when the cylinder is filled, thus ensuring faster maintenance.*

SIEX has applied its firefighting expertise and knowledge to the development of the RGS-MAM-12-3 cylinder valve, specifically designed for the INERT-SIEX™ 55 system. No other valve delivers such reliability, efficiency and safety, combined with a great flow that makes it ideal for large storage capabilities, unique in its class. This, added to its quick action and discharge, ensures fast action against fire, facilitating its extinguishing.

This valve ensures a seamless connection to the system at output in both modular equipment and cylinder banks by means of flexible hoses which greatly facilitate installation and allow for safe agent discharge. The connection with the cylinder and the valve itself are totally sealed, preventing any leakage of extinguishing agent and ensuring total reliability of the system during its useful lifetime.

It can be installed with a variety of actuators: electric, manual, pneumatic, pyrotechnic, and even pneumatic-manual or pyrotechnic-manual. The result is a highly versatile system that meets the general requirements of the system. This valve may also act as a master valve in cylinder banks or with slave cylinders, used with a pilot. They may also be activated pneumatically via a pilot cylinder or cartridge, and can also be combined effectively with the use of selector valves. It should be stressed that any change required to the arrangement of the actuators can be done with the cylinder charged, without posing any type of risk or leakage possibility.

The RGS-MAM-12-3 valve has the necessary elements to control the cylinder load. Pressure gauges are suitable for local inspection and maintenance of the equipment. In addition, gauges with electric contacts and pressure switches, which also enable remote monitoring of the system. Designed for great operating ranges, they provide high accuracy and reliability.

Made of hot-stamped brass, they have been designed to withstand high pressures, resulting in extraordinary sturdiness. This ensures, despite the high pressure, total safety during transport and handling of equipment supplied by SIEX. A calibrated burst disc located in the valve itself automatically relieves pressure in cases where a certain limit is exceeded, ensuring the integrity of the system and thus of people and goods.

*We provide comprehensive technical support in all project phases via hydraulic calculation software, tips, manuals, after-sales service and maintenance.*



# SAFETY

## PNEUMATIC RETARDERS

Pneumatically and safely delay extinguishing agent discharge, either directly, acting through a modular or master cylinder in a cylinder bank or indirectly, through a pilot cylinder. This lag time is 30 or 60 seconds, enough for staff to evacuate safely once the alarm is triggered. This device allows overriding the delay manually, if necessary.

The operation is completely self-contained, and its fail-proof pneumatic operation prevents any delay that could prove dangerous, thus ensuring safety at all times.

## PNEUMATIC TRIP

The purpose of these elements is to close doors, dampers, ducts, windows, etc. The activation of this actuator is pneumatic, through a pilot cylinder, or manually through a ring or knob.

## PNEUMATIC SIRENS

They make a long, sharp sound, sufficiently intense to alert all personnel at risk in the range of the firefighting system discharge. They work pneumatically, ensuring reliability even in a power failure affecting the detection network. Facilitates evacuation of the enclosure in case of imminent discharge, thus improving system security.

## ODORIZERS

The IG-55 gas is colourless and odourless, and its presence is therefore difficult to detect. By using an odorizer to add a smell to the agent, anyone within range of this agent can avoid possible risks. Located in the discharge manifold or piping system, the agent discharge itself mixes the odour, so that from the first moment the presence of the extinguishing agent is detectable in the enclosure.

## LOCK-OUT VALVE

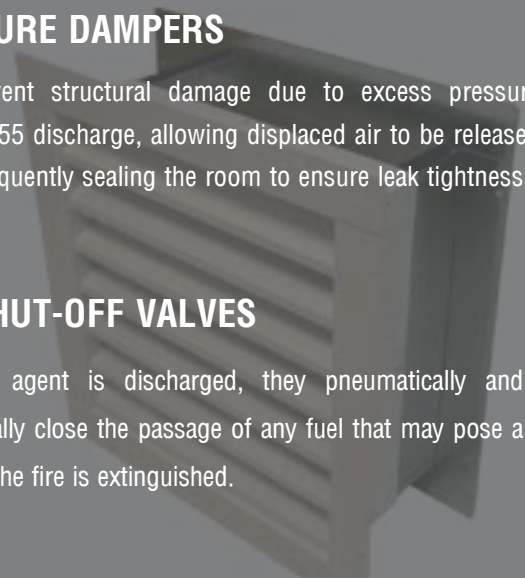
Prevents accidental discharge of the system when required. It should remain in closed position when there are personnel working in the protected enclosure, and should be in open position when the enclosure is unoccupied. Designed to withstand the pressure if discharge blocking is necessary. To enhance the safe use of these elements, position switches are available that warn of an incorrect position of these valves.

## PRESSURE DAMPERS

They prevent structural damage due to excess pressure during IG-55 discharge, allowing displaced air to be released and subsequently sealing the room to ensure leak tightness.

## GAS SHUT-OFF VALVES

Once the agent is discharged, they pneumatically and automatically close the passage of any fuel that may pose a risk once the fire is extinguished.



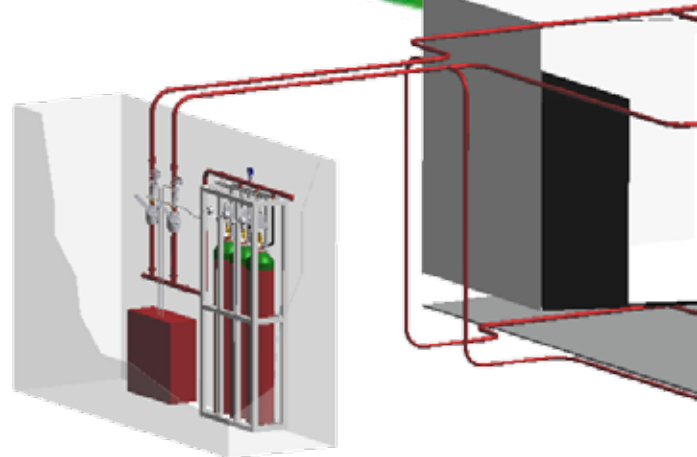
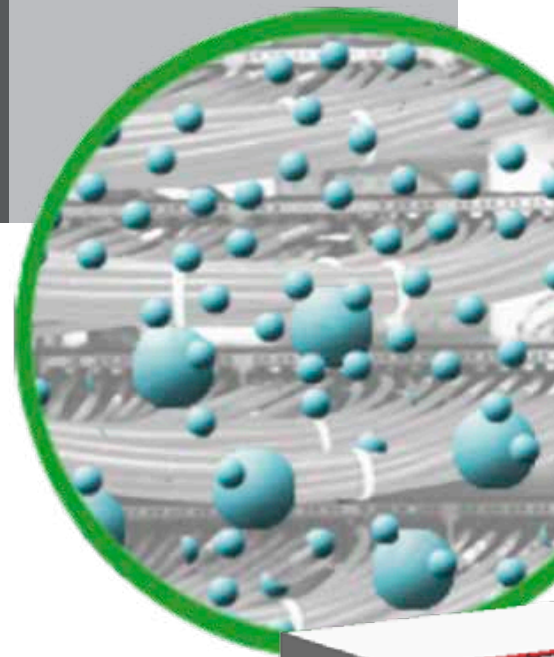
# OPERATION

The IG-55 agent is a blend of 50% nitrogen and 50% argon, both gases obtained from the atmosphere. They are stable and do not react, thus completely avoiding the formation of dangerous compounds either by temperature, pressure, humidity or the presence of any other chemical compound.

The use of this agent covers numerous applications: solid, flammable liquid, electrical and electronic fuels. These systems can be adapted for total flooding protection of enclosures of any construction, size and configuration.

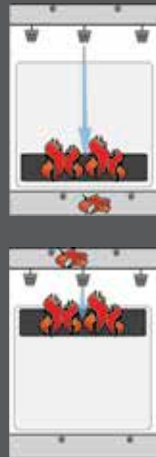
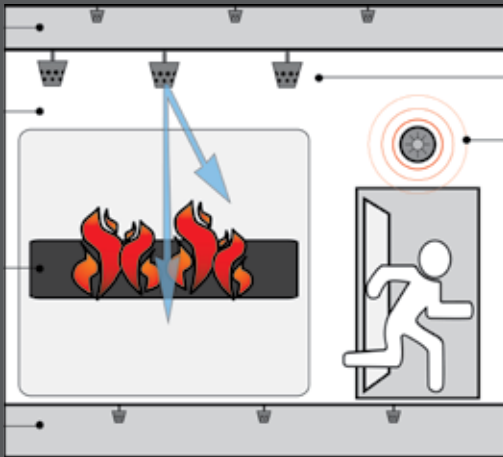
## THE IG-55 EXTINGUISHING AGENT

- *Proven safety for people*
- *High extinguishing capability*
- *100% environmentally friendly*
- *Easy to store agent away from protected hazard.*
- *Leaves no residue or condensation inside the protected enclosure*
- *Electrically non-conductive*
- *Suitable for use with selector valves*

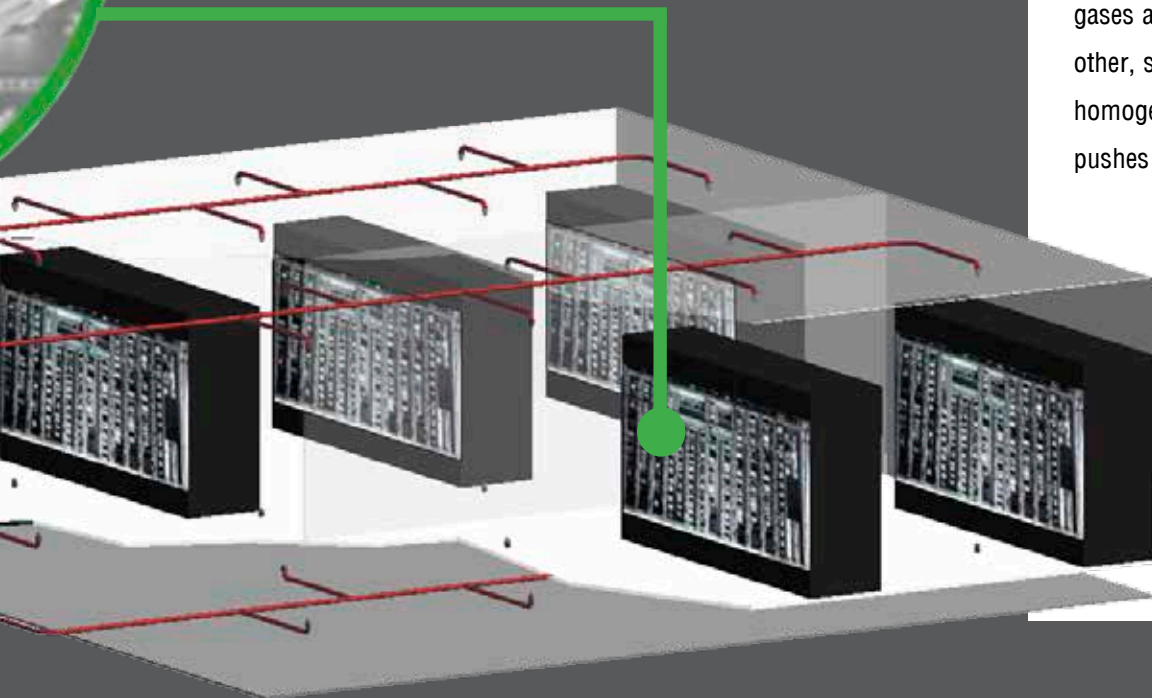




# EXTINGUISHING



*The ARGON remains in the upper part of the room, while the NITROGEN descends to the lower part*



The IG-55 agent has unique properties that optimize its action: stratification of agent at various levels (argon, more dense than air, in the middle and lower parts, and lighter nitrogen above) provides comprehensive protection throughout the enclosure, minimizing possible leaks.

## **STRATIFICATION IMPROVES PROTECTION THROUGHOUT THE ENCLOSURE.**

Applying a pressurized gas over an object influences the efficiency of extinguishing very favourably: gases are highly miscible with each other, so agent concentration will be homogeneous. Besides, the pressure pushes and displaces the ambient air from any corner of the room, ensuring a three-dimensional action, regardless of obstacles and shields.

# APPLICATIONS



*Stations and airports*



*Telecommunication systems*



*Computer Rooms*



*Gas installations*



*Offshore platforms*



*Hospitals*



*Wind turbines*



*Petrochemical facilities*



*Laboratories*



*Electrical cabinets and substations*



*Archives and libraries*



*Educational establishments*



*Pharmaceutical industry*



*Museums and art galleries*



*Offices*



*Residential buildings*

# BENEFITS OF USING INERT-SIEX™ 55

*PROTECTION OF THE ENCLOSURE FROM FLOOR TO CEILING, THANKS TO STRATIFICATION. ITS OMNIDIRECTIONAL ACTION REACHES INACCESSIBLE SPACES, MOVING BETWEEN OBSTACLES.*

*AT THE SAME TIME IT BENEFITS:*

## *THE INSTALLER:*

- Quick and easy installation.
- Allows for long and complex pipe runs.
- Safe valves which can be manipulated with loaded cylinders.
- Fast and simple maintenance.

## *THE USER:*

- Total, safe protection in case of fire.
- Safe evacuation, maintaining an appropriate level of oxygen.
- Existence of safety-enhancing components: retarder, siren, etc.

## *THE CUSTOMER:*

- Immediate resumption of activity, no cleaning work and no damage to documents or assets.
- Clean and non-toxic, does not damage the equipment.
- Minimal use of storage space.
- Low protection system cost.

## *THE PLANET:*

- No impact on ozone (ODP)
- No global warming potential (GWP)
- Does not pollute or produce residues.

The logo for Siex, featuring a stylized red flame icon on the left and the word "Siex" in a large, bold, dark grey font to its right.

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