

**CHEMETRON**

Fire Systems™

**ARGONITE®**



*A World of Protection*

## *Would Your Business Survive A Fire?*

**Being unprepared for a fire can disrupt your operation and financial future. A rapid response and recovery will depend on making the right fire protection choice.**

**When evaluating a fire extinguishing solution for your growing business, consider a Chemetron ARGONITE integrated fire extinguishing system. An environmentally friendly and people-safe gaseous agent, ARGONITE protects special hazards where fire could endanger functions vital to your business operations.**

**The Chemetron ARGONITE team can analyze your specific fire hazards and recommend a complete strategy to mitigate your risk. With our worldwide reach, Chemetron Fire Systems is your single source solution for standard or custom designed special hazards fire protection.**

## Integrated Fire Protection Performance

As a pioneer in fire suppression technology, Chemetron Fire Systems has set the benchmark for quality special hazard fire protection systems. Our engineering and technical experts will design a system specific for hazard-based performance, safety and maintenance.

Chemetron is a single, dependable source for special hazard fire suppression systems. We design systems that protect people and property, integrating:

- Fire hazard evaluations
- Hardware
- Innovative computer software
- Advanced engineering, technical and service support
- A worldwide distribution and service network
- A commitment to environmental safety

By integrating hardware, agent and technical expertise the result is a targeted and effective fire suppression system for a wide range of worldwide applications.

## The Chemetron ARGONITE Difference

Accelerating technological changes are transforming the way we live and conduct business.

When planning and designing a fire protection system, consider that a Chemetron ARGONITE system can meet the safety and quality standards for challenging industry applications, and that ARGONITE has been tested and approved by regulatory bodies throughout the world.

Benefits of a Chemetron ARGONITE system:

- Low installation, recharge and maintenance costs
- Effective against fires in almost all combustible materials and flammable liquids
- Lower ambient temperature storage
- Can be integrated with existing detection and alarm systems
- Automatic or manual release
- Total flooding application
- Minimum downtime after a fire

Through our global distributor and service network, Chemetron has the capability to fulfill your fire protection requirements around the world.

# *Rapid Acting*





## ARGONITE Advantages

Chemetron ARGONITE is an environmentally acceptable, people-compatible clean agent fire extinguishant for vital facilities with a wide range of hazards. Developed as a Halon replacement, ARGONITE extinguishes fire by reducing the oxygen concentration to a level acceptable for human exposure over a short period of time.

As a clean agent, ARGONITE offers these benefits:

- Zero Ozone Depletion Potential (ODP)
- Zero Global Warming Potential (GWP)
- Produces no secondary combustion products
- No post-fire residues to clean up nor damage to protected equipment
- Is electronically non-conductive
- Safe for use in a wide range of sensitive applications where people are present.

## Market Sectors

Chemetron ARGONITE systems safeguard lives, assets and reputations. Our capability to engineer solutions that meet challenging business and industry applications are evident in a variety of market sectors worldwide.

Art Galleries, Museums, Archive Storage  
 Computer Operations  
 Control Rooms  
 Financial Centers and Banks  
 Electronics and Data Processing  
 Military Installations  
 Offshore Oil and Gas Installations  
 Petrochemical Installations  
 Pharmaceutical and Medical Facilities  
 Process Industry/Control Rooms  
 Rare Book Libraries  
 Record Storage Facilities  
 Shipboard (Marine) Systems  
 Substations/Control Rooms  
 Switch Rooms  
 Telecom Centers  
 Universities and Colleges

Chemetron Fire Systems protects many critical facilities worldwide. We offer custom-designed systems engineered to precise requirements and backed by a global installation and service network. Chemetron Fire Systems' reputation is measured in terms of reliability, performance and continuity of service.

The Chemetron name remains the symbol for quality standards, reliability and safety.

## System Design & Reliability

Chemetron ARGONITE system components are manufactured to meet exacting specifications that follow strict quality controls. Our manufacturing process, certified within the international quality system, provides solutions that ensure reliability, security and continuity of service for our customers.

Room size, configuration and special hazard evaluations determine system design. An installation consists of one or more pressurized cylinders connected via a common manifold; with a choice of automatic, manual-electric or manual pneumatic actuation. The valve design and cylinder size and pressure augment a properly calculated pipe and nozzle installation to ensure the agent is effectively released to the protected area.

## Working Pressure

- ARGONITE discharges at a typical pressure of 12 - 60 bar (174 - 870 psi), which allows the use of standard Schedule 80 pipe.



*More Experience. More Applications Worldwide.***ARGONITE Storage**

- ARGONITE is stored as pressurized gas within the cylinder assembly.
- It is available at storage pressures of 200 bar (2900 psi) and 300 bar (4,353 psi).
- Three cylinder sizes are available at each storage pressure:
  - 4.5 kg (10 lb)
  - 19 kg (40 lb)
  - 22.5 kg (50 lb)

Because ARGONITE is stored as a gas, the cylinders have no dip tubes and can be mounted in either the vertical or horizontal position.

**Chemetron ARGONITE System Components**

The Chemetron ARGONITE Fire Protection Systems are automatic extinguishing systems using ARGONITE (IG-55) and consisting of four basic components and their associated accessories:

- **Storage, valve and discharge components**

These components consist of the agent cylinders, valve assemblies, cylinder racking and the agent discharge nozzles.

- **Completer Kits**

The kits provide all the basic components necessary to operate the ARGONITE cylinders and consist of hoses, connection fittings, pressure gauges, actuation devices required to operate the cylinder valve and warning signs to be displayed in the area

- **Control Panel**

The control panels vary in features and complexity, but in all cases are used to monitor the detection, actuate the alarms, initiate the agent discharge and control auxiliary functions such as shut down of vital equipment.

- **Detection and Alarm Devices**

These devices provide audible and visual pre-alarm warnings and annunciation of the ARGONITE discharge.

**Agencies and Test Protocols Recognizing ARGONITE Systems:**

Bureau Veritas  
C.N.P.P. - France  
Danish Maritime Authority  
Environmental Protection Agency (EPA) - USA  
Halon Alternatives Group (HAG) - UK  
Lloyds Register-UK  
LPCB - Loss Prevention Certification Board - UK



National Fire Protection Association (NFPA) 2001 - IG 55  
Det Norske Veritas (DNV) - Denmark  
VdS, Components are listed - Germany

- **Health and Safety Approvals**

German Hygiene Institute  
TNO Voding of Holland  
EPA SNAP List - USA

**Global Recognition**

Chemetron is the single source solution for integrated fire suppression systems that meet today and tomorrow's challenging requirements. Our solid reputation along with the integration of a global distributor and service network will safeguard your business.

The Chemetron mission is simple. When it comes to fire protection there can be no compromise.

***Chemetron.  
Your Single  
Source Solution.***



# ARGONITE



## Principle, Properties and Characteristics

ARGONITE is an inert gas that extinguishes fire based on the principle of oxygen depletion. In a closed space almost all fires are extinguished in less than 60 seconds when the oxygen concentration falls below 15%. ARGONITE reduces the oxygen concentration to approximately 12.5%, an acceptable level for human exposure over short periods of time.

ARGONITE extinguishes fire by physically removing oxygen from the atmosphere. In occupied areas, people can breathe ARGONITE at extinguishing concentrations without fear. There are no toxicological factors associated with the use of ARGONITE and ARGONITE will not decompose or produce any by-products when exposed to a flame from a fire condition.

An ARGONITE discharge will not create a fogging effect - therefore vision is not compromised or obscured.

Most ARGONITE systems are designed to extinguish fires with a minimum agent concentration of 40% within one minute. When Argonite is released into an enclosed space, an inactive atmosphere is established in which the oxygen

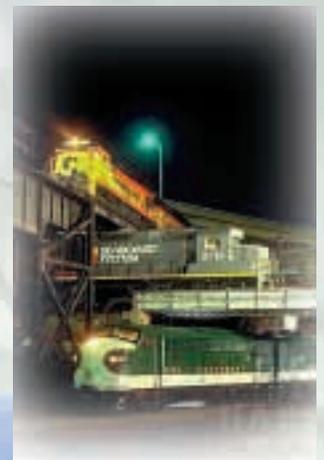
concentration will be decreased from a normal 21% to 12-13% by volume. At this concentration, fires will be effectively extinguished.

ARGONITE is an inert gas blend consisting of a 50:50 mixture of two gases found naturally in the atmosphere: Argon (Ar) and Nitrogen (N<sub>2</sub>).

An ARGONITE discharge results in a gas mixture with a density similar to that of air, therefore:

- Hold times are greatly increased.
- The need for room sealing is reduced.

At room temperature it is a colorless, odorless gas. It is environmentally neutral, having zero ozone depletion potential (ODP) and zero global warming potential (GWP).



***Worldwide Protection  
for People, Property  
and the Environment.***





# A World of Protection

## Worldwide Applications

### FM-200®

- Telecommunication Facilities
- Computer Operations
- Control Rooms
- Shipboard (Marine) Systems
- Rare Book Libraries
- Universities and Museums
- Art Galleries
- Record & Storage Facilities
- Petrochemical Installations
- Pharmaceutical & Medical Facilities
- Electronics & Data Processing Equipment

### Water Mist

- Gas Turbines
- Machinery Spaces
- Steam Turbine Generator Bearings

### ARGONITE®

- Railway & Airport Signal Traffic Controls
- Laboratories
- Control Rooms
- Banking
- Switchgear Rooms
- Museum Archive Storage
- Libraries
- Universities
- Archive Rooms
- Blast Furnace Hydraulic Cellar
- Theater Decoration & Prop Storage
- Security Company Money Safe Deposit
- Electrical Rooms
- Stock Exchanges
- Telecommunication Facilities
- Document Records and Currency Counting & Storage Areas
- Computer Operations
- Shipboard (Marine) Systems
- Art Galleries
- Petrochemical Installations
- Pharmaceutical & Medical Facilities
- Electronics & Data Processing Equipment

### CO<sub>2</sub>

- Power Generation
  - Base Load Plants
  - Co-generation & Combined Cycle Plants
  - Power Peaking Units
  - Upgrading Existing Plants: w/
    - Coal Conversions
    - Coal Storage/Handling/Pulverizing
- Cement Plant/Blast Furnace
  - Indirect Coal Firing Systems
- Metals Production and Processing
  - Electric Furnaces
  - Continuous Casters
  - Rolling Mills (Steel & Aluminum)
  - Coating Lines
- Printing
  - Newspaper Production
  - Periodical Printing
  - Packaging
- Automotive
  - Assembly: Paint Application, Mixing & Storage
  - Parts: Machining, Heat Treating
- Electronics Operations
  - Computer Areas
  - Automated Information Storage Systems
- Electronics/Computer Production
  - Wet Benches
  - Wave Soldering Machines
- Food Processing
- Research Facilities
  - Test Facilities
  - Anechoic Chambers
- Shipboard (Marine) Systems
- Automated Storage and Retrieval Facilities

**CHEMETRON**

**Fire Systems™**

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**Chemetron. Your Single Source Solution.**

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