KILLFIRE

Kidde Fire Suppression Systems for Marine and Land Industry

Asiatic Fire System Pte Ltd,
- UL & FM Approved First Fill Station for Clean Agent System,
- Full Line Distributor for Kidde Fire Systems

A Subsidary of
Asiatic Group (Holdings) Limited

LICENCED UNDER KIDDE-FENWAL - FIRST FILL STATION

EX4674

APPROVED

Asiatic Fire System Pte Ltd

i. FIRST FILL STATION APPOINTMENT - By Kidde-Fenwal Inc Approved by UL & FM

Asiatic Fire System Pte Ltd has worked intensely with Kidde-Fenwal to be the First Fill Station audited and approved by UL & FM in Singapore. This is the first First Fill Station for Clean Agent Fire Suppression System under Kidde licence in Asia while the rest of the 4 locations are in the Western Hemisphere.

Asiatic Fire System has passed the audit by Kidde and has proven to be competent to perform the necessary procedures prior to UL & FM Audits. Upon the completion of the required UL & FM audits, the approvals can than be obtained.

With this approval, Asiatic is able to provide the First Fill solution for the following Clean Agents:

- HFC-227ea (FM200)
- FK-5-1-12 (Novec 1230 by 3M)

With this investment, Asiatic enhanced the technical services & products that are available to the customers in both Marine & Land. The products & services are as follow:

- Design & calculate the Clean Agent Suppression System,
- Supply and install of products designed,
- Commission and test products to applications,
- Maintenance to the installed fire-fighting equipment,
- Total product, technical solutions & knowledge accessible by the customers,
- Increase range of products and services accessible by the customers.

ii. FULL LINE DISTRIBUTORSHIP - By Kidde Fire Systems

Asiatic Fire System as Full Line Distributor is able to provide the full range of products under the Kidde Fire Systems to the customers which includes parts replacement and complete solution for the entire product line.

This new appointment provides Asiatic Fire System the access to products & technologies which were not in the products and services supply scope. Thus, together with the existing products and services, it brings Asiatic Fire System to meet the vision of comprehensive solutions that can be provided to the customers both Marine and Land Industry.

CONTENT PAGE

Kidde Trademarks:

ECS™ - Engineered Central Storage
ADS™ - Advanced Delivery System
HP CO_2 - High Pressure Carbon Dioxide
WHDR™ - Wet Chemical Kitchen System

KILLFIRE

ECS ™ 360 PSI

CLEAN AGENT FIRE SUPPRESSION SYSTEM for HFC-227ea & FK-5-1-12

Proven. Effective. Reliable.

Fire Protection that's Engineered Clean and Safe for Vital Facilities

Equipment and processes are vital to the success of all commercial endeavors. Consider the ramifications of a fire in these critical areas. Smoke or soot contamination, water damage, destroyed equipment and idle process lines could force your business offline and out of competition. The Kidde Fire Systems ECS 360 psi Suppression System detects and extinguishes fires in seconds, safeguarding your people, property and bottom line, while maintaining business continuity.

ECS 360 psi System Benefits:

- Active on Fire, Safe for People – ECS 360 psi Suppression System combines the benefits of clean agent systems and active fire protection with people-safe, environmentally-responsible performance
- The Right Clean Agent – A range of Clean Agents discharge as gases, leaving no residue to damage sensitive equipment or require costly clean-up
- The Right Fire Suppression System – Designed to fully discharge the clean fire suppression agent into a protected area within 10 seconds, ensuring the system extinguishes a fire quickly
- Fully Integrated System – Kidde Fire Systems offers a complete fire protection system that is designed, manufactured, installed and serviced by one company

Kidde Fire Systems

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Why Choose an ECS 360 psi Clean Agent System?

Rapid-Response. In seconds, not minutes, the ECS 360 psi System discharges the suppression agent into the hazard area providing the fastest fire protection available. This results in less damage, fewer repair costs and reduced downtime.

Damage-Free. Removed from the hazard area by ventilation, ECS 360 psi Clean Agents allow a virtually immediate return to "business as usual" without the interruption of a lengthy clean-up or the expense of damage to assets from residue.

People-Safe. ECS 360 psi Clean Agents are non-toxic, when used in compliance with NFPA Standard 2001, and do not impair breathing or obscure vision in an emergency situation, providing an added measure of safety for personnel.

Environmentally-Responsible. With a zero Ozone Depletion Potential, a low atmospheric lifetime, and its rapid suppression performance, ECS 360 psi Clean Agents offer low environmental impact and reduce the potentially devastating atmospheric pollutants of an uncontrolled fire.

Laboratory-Tested. ECS 360 psi Clean Agents have been tested and found to be effective on the widest possible range of Class A surface fire (wood, paper and cloth), Class B (flammable liquids) and Class C (electrical) fuels.

Globally-Accepted. Used in more than 70 countries around the world, ECS 360 psi Clean Agents meet the standards of Underwriters Laboratories, FM Approvals, the National Fire Protection Association (2001 Standard), the U.S. EPA SNAP program and most global approval authorities.

Approvals and Listings:

- UL Listed
- FM Approved
- USCG Approved

Typical Applications Protected by an ECS 360 psi Clean Agent System:

- Bank Vaults
- Battery Backup Rooms
- Clean Manufacturing Facilities
- Data Processing Centers
- Document Storage
- Hazards up to 30,000 cubic feet (850 cubic meters)
- Process Control Rooms
- Simulators

Integrated ECS 360 psi Clean Agent System Components:

- Control Unit
- Smoke Detection
- Heat Detection
- Suppression Cylinders
- Notification Devices
- Manual Pull Stations

Kidde Fire Systems Clean Agents:

- HFC-227ea
- 3M ™ Novec ™ 1230 Fire Protection Fluid

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508.881.2000
www.kiddefiresystems.com

Kidde Fire Systems

KILLFIRE

ECS-500 ™ WITH 3M ™ NOVEC ™ 1230 FIRE PROTECTION FLUID

CLEAN AGENT FIRE SUPPRESSION SYSTEM

Optimize cylinder storage location for flexible and cost-effective installation

The ECS-500 Clean Agent Suppression System is the newest entry in our engineered clean agent suppression product line. The higher pressure (500 psi/34.5 bar) of the ECS-500 provides superior system performance as compared to 360 psi/25 bar systems. Now you have the flexibility of a mid-tier solution between our standard ECS™ and Advanced Delivery System (ADS™) to meet application size, design requirements and the client's budget.

ECS-500 System Benefits:

The ECS-500 system provides all the benefits of the standard ECS system with added advantages that provide improved system design flexibility and reduced installation and material costs:

- New 1,100 lb. cylinder reduces cylinder quantities and installation time required, while providing enough agent to cover up to a 27,000 ft. 3 area with a single cylinder
- Increased system pressure allows for longer pipe runs and use of smaller pipe diameters
- Provides flexibility to remotely locate cylinder storage area more than twice the distance from the hazard area when compared to 360 psi/25 bar systems

ECS-500 System Features:

- A wide range of filling capacities from 6 lbs. to 1,100 lbs.
- Fire protection of up to 27,000 ft. 3 with a single cylinder
- Provides economical protection of multiple enclosures when used with directional valves

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Why Choose the ECS-500 Clean Agent System?

Rapid-Response. In seconds, the ECS System discharges the suppression agent into the hazard area resulting in less damage, fewer repair costs and reduced downtime than a standard code-compliant sprinkler system.

Damage-Free. Removed from the hazard area by ventilation, the agent allows a virtually immediate return to “business as usual” without the interruption of a costly clean-up and the expense of damage to assets from residue.

People-Safe. The agent is non-toxic, when used in compliance with NFPA Standard 2001 and does not impair breathing or obscure vision in an emergency situation, providing an added measure of safety for personnel.

Environmentally-Responsible. With a zero Ozone Depletion Potential, a low atmospheric lifetime, and its rapid suppression performance, the agent not only offers low environmental impact, but reduces the potentially devastating atmospheric pollutants of an uncontrolled fire.

Laboratory-Tested. The agent has been tested and found to be effective on the widest possible range of Class A surface (wood, paper and cloth), Class B (flammable liquids) and Class C (electrical) fires.

Globally-Accepted. Used in more than 70 countries around the world, the agent meets the standards of Underwriters Laboratories, FM Approvals, the National Fire Protection Association (2001 Standard), the U.S. EPA SNAP program and most global approval authorities.

ECS-500 System Approvals and Listings:

- cULus Listed
- FM Approved
- Other marine- and land-based approvals in process

Typical Applications Protected by an ECS-500 Clean Agent System:

- Data Processing Centers
- Process Control Rooms
- Clean Manufacturing Facilities
- Bank Vaults
- Simulators
- Battery Backup Rooms
- Document Storage

Integrated ECS-500 Clean Agent System Components:

- Control Unit
- Smoke Detection
- Heat Detection
- Suppression Cylinders
- Notification Devices
- Manual Pull Stations

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ADS ™ WITH FM-200 ™

CLEAN AGENT FIRE SUPPRESSION SYSTEM

Engineered System Providing Exceptional Performance

The Kidde Fire Systems ADS with FM-200 Clean Agent Suppression System was developed by our engineers to provide economical protection for larger enclosures requiring longer agent flow distances. Its innovative technology allows the ADS with FM-200 System to deliver mass flow rates 2.5 to 3 times faster than a standard clean agent system. This innovation allows networking of longer pipe runs in complex configurations with smaller pipe sizes for protection of larger hazard areas.

ADS with FM-200 System Benefits:

- Increased agent flow rates and distances provide better coverage for larger hazard areas
- Smaller piping diameter results in installation cost savings
- Ultimate design flexibility provides the most economical protection for many applications
- Offers higher cylinder fill capacities for more efficient agent storage
- Enhanced performance and versatility – 3-way directional valves for economic protection of multiple enclosures

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Why Choose an ADS with FM-200 System?

Rapid-Response. In seconds, the ADS with FM-200 System discharges the suppression agent into the hazard area resulting in less damage, fewer repair costs and reduced downtime.

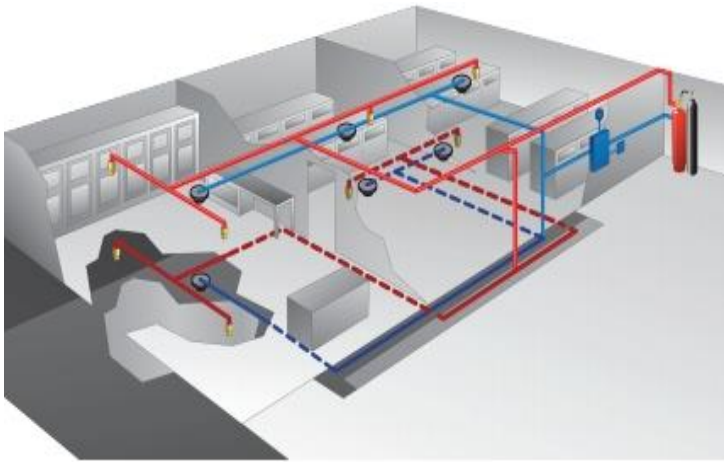
Damage-Free. Removed from the hazard area by ventilation, the clean agent allows virtually immediate return to “business as usual” without the interruption of a lengthy clean-up or the expense of damage to assets from suppressant residue.

People-Safe. Clean agents are non-toxic, when used in compliance with NFPA Standard 2001 and do not impair breathing or obscure vision in an emergency situation, providing an added measure of safety for personnel.

Environmentally-Responsible. With zero Ozone Depletion Potential, low atmospheric lifetime, and speedy suppression performance, clean agents offer low environmental impact and reduce the potentially devastating atmospheric pollutants of an uncontrolled fire.

Laboratory-Tested. Clean Agents have been tested and found to be effective on the widest possible range of Class A surface fire (wood, paper and cloth), Class B (flammable liquids) and Class C (electrical) fuels.

Globally-Accepted. Used in more than 70 countries around the world, clean agents meet the standards of Underwriters Laboratories, FM Approvals, the National Fire Protection Association (2001 Standard), the U.S. EPA SNAP program and most global approval authorities.



Typical Applications Protected by an ADS with FM-200 Clean Agent System:

- Health Care Facilities
- Internet Hosting Facilities
- Larger Manufacturing Complexes
- Multi-level Sites
- Recording Studios
- Telecommunications Facilities

Integrated ADS with FM-200 Clean Agent System Components:

- Control Unit
- Smoke Detection
- Heat Detection
- Suppression Cylinders
- Notification Devices
- Manual Pull Stations

Approvals & Listings:

- UL Listed
- FM Approved
- USCG Approved

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KILLFIRE

ADS ™ WITH 3M ™ NOVEC ™ 1230 FIRE PROTECTION FLUID

CLEAN AGENT FIRE SUPPRESSION SYSTEM

Ideal for Long Distances and Complex Piping Networks

The Kidde Fire Systems ADS Suppression System with 3M™ Novec™ 1230 Fire Protection Fluid improves the performance of a standard 360 psi system by using a Nitrogen driver to “push” the agent through the piping network. This innovation provides better coverage, greater nozzle heights, smaller diameter pipe and longer pipe runs than a standard clean agent suppression system.

ADS System with Novec ™ 1230 Fluid Benefits:

- Flexibility to protect multiple hazards from a single cylinder bank location by adding 3-way directional valves
- If space is not restricted, placement in or near hazard area allows for smallest possible pipe diameter to be used, resulting in installation cost savings
- Increased flow rates allow for better coverage of larger hazard areas

ADS System with Novec ™ 1230 Fluid Features:

- Cylinders can be located up to 200 feet from hazard area
- Nozzle can be placed at a height of up to 18’ 6”
- Nozzle coverage area of up to 42’ 6” x 42’ 6”

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Why Choose an ADS with Novec 1230 Fluid System?

Rapid-Response. In seconds, the ADS with Novec 1230 Fluid System discharges the suppression agent into the hazard area resulting in less damage, fewer repair costs and reduced downtime.

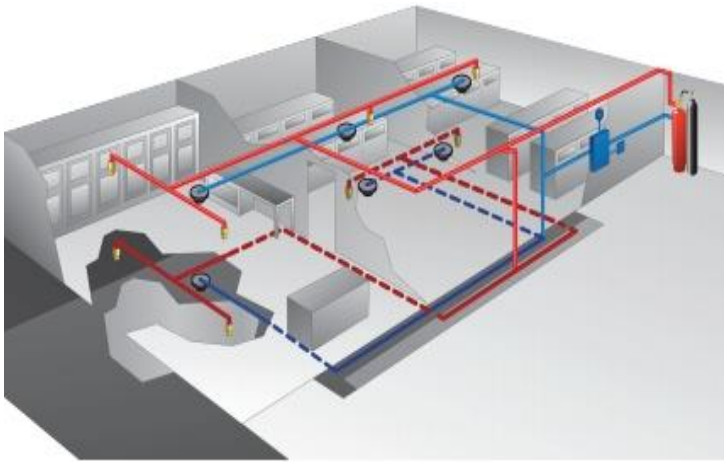
Damage-Free. Removed from the hazard area by ventilation, the clean agent allows virtually immediate return to “business as usual” without the interruption of a lengthy clean-up or the expense of damage to assets from suppressant residue.

People-Safe. Clean agents are non-toxic, when used in compliance with NFPA Standard 2001 and do not impair breathing or obscure vision in an emergency situation, providing an added measure of safety for personnel.

Environmentally-Responsible. With zero Ozone Depletion Potential, low atmospheric lifetime, and speedy suppression performance, clean agents offer low environmental impact and reduce the potentially devastating atmospheric pollutants of an uncontrolled fire.

Laboratory-Tested. Clean Agents have been tested and found to be effective on the widest possible range of Class A surface fire (wood, paper and cloth), Class B (flammable liquids) and Class C (electrical) fuels.

Globally-Accepted. Used in more than 70 countries around the world, clean agents meet the standards of Underwriters Laboratories, FM Approvals, the National Fire Protection Association (2001 Standard), the U.S. EPA SNAP program and most global approval authorities.



Typical Applications Protected by an ADS with Novec 1230 Fluid Clean Agent System:

- Health Care Facilities
- Internet Hosting Facilities
- Larger Manufacturing Complexes
- Multi-level Sites
- Recording Studios
- Telecommunications Facilities

Integrated ADS with Novec 1230 Fluid Clean Agent System Components:

- Control Unit
- Smoke Detection
- Heat Detection
- Suppression Cylinders
- Notification Devices
- Manual Pull Stations

Approvals & Listings:

- UL Listed
- FM Approved
- USCG Approved

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KILLFIRE

HP CO_2

HIGH-PRESSURE CARBON DIOXIDE FIRE SUPPRESSION SYSTEM

Fast Fire Protection for Challenging Hazards

Effective and Reliable Suppression

Flammable materials and vapors present a significant risk of fire for many industrial processes and environments. The Kidde Fire Systems High-Pressure (HP) Carbon Dioxide (CO_2) Suppression System was designed to provide complete fire protection for a wide range of challenging applications from printing presses and generator enclosures to dip tanks and commercial fryers. The Kidde Fire Systems HP CO_2 system delivers clean, dependable suppression in seconds, greatly reducing the loss of assets, productivity and revenue associated with a fire-related business interruption.

The Kidde Fire Systems HP CO_2 System utilizes highly sophisticated electric and/or pneumatic detection units which sense fire at its inception, immediately alerting the control system. The Control Panel initiates the release of CO_2 from the system cylinders. The suppressant is delivered through a fixed piping network with specially designed nozzles; providing rapid, automatic fire protection around the clock.

The Kidde Fire Systems HP CO_2 is ideal for industrial processes where flammable materials and vapors present a potential hazard. For this reason, it is essential to have sufficient fire protection on site. The Kidde Fire Systems HP CO_2 System, designed specifically for the hazard and operated automatically, assures immediate detection and rapid suppression.

HP CO_2 System Features:

- Damage-Free Fire Suppression Reduces Loss
- Design Versatility with Three System Configurations
  - » Total Flooding
  - » Local Application
  - » Local Hose Line
- Rapid Response - Discharges in Seconds
- Fights Surface or Deep-Seated Fires

Kidde Fire Systems

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Why Choose an HP CO_2 System?

Superior Suppression. Carbon dioxide is a colorless, odorless, electrically-nonconductive gas whose density is approximately 50% greater than air. A Kidde Fire Systems HP CO_2 System suppresses fire by providing a blanket of heavy gas that absorbs heat from the fire and reduces the oxygen content of the atmosphere to a point where combustion becomes impossible.

Damage-Free. A naturally-occurring atmospheric element, carbon dioxide dissipates into the air allowing an almost immediate return to "business as usual" without the interruption of a costly clean-up and the expense of damage to assets from suppressant residue. This results in fewer repair costs and reduced downtime.

Design Versatility. Because carbon dioxide is an ideal suppressant for a wide variety of industrial applications, Kidde Fire Systems offers three system configurations to efficiently protect different hazard types: Total Flooding, ideal for enclosed hazard areas, Local Application, used to protect a specified hazard area in an open floor plan, or a Local Hose Line, cost effective protection for fighting smaller fires throughout a hazard.

Kidde Fire Systems Quality. At Kidde Fire Systems, we know a fire-related business interruption can keep your company from being competitive in a global market. We are committed to researching, developing and providing the most advanced fire protection technology and best customer service in the industry. We understand the marketplace demands an "up and running" business world around the clock. We are dedicated to keeping industry "in business" by keeping fires out.

Typical Applications Protected by an HP CO_2 System:

- Flammable Liquid Storage Areas
- Marine Applications
- Quench and Dip Tanks
- Large Commercial Fryers
- Engine and Electrical Rooms
- Spray Booths and Paint Lockers
- Turbine Generators
- Printing Presses
- Rolling Mills
- Dust Collectors
- Industrial Ovens
- Mixing Operations

Local Applications for an HP CO_2 System:

- Modular HazMat Storage Facilities
- Exhaust Ducts
- Machinery Spaces
- Environmental Storage Facilities

Approvals & Listings:

- UL Listed
- FM Approved
- USCG Approved

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Kidde Fire Systems

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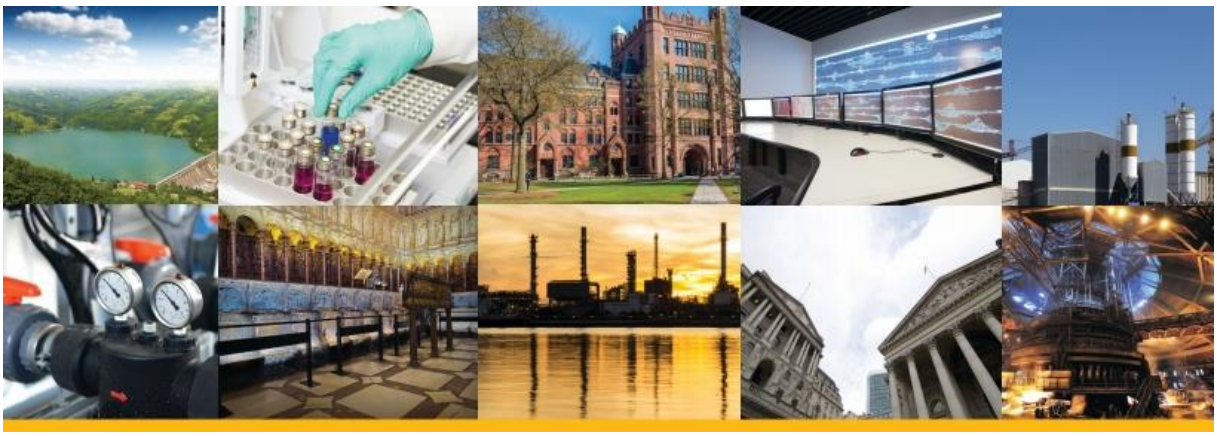

NITROGEN FIRE SUPPRESSION SYSTEM

Safe for People & Equipment

Protection for Challenging Applications

When considering your fire suppression system needs, know that a Kidde Fire Systems Nitrogen system can be used in a variety of commercial and industrial applications. Nitrogen is a naturally occuring gas that operates as a fire suppressant.
Fire suppression is achieved by reducing the oxygen concentration where the fire will extinguish, while remaining at a level acceptable for human exposure for a short period of time.

Room size and combustible material requirements determine the system design. A system consists of one or more cylinder with specialized equipment connected to a fixed pipe network. The engineered design selects appropriate pipe sizes and nozzles to ensure effective suppression. These systems will operate automatically via detection devices, manually from electric release stations or by manual pneumatic means.

Nitrogen System Benefits:

- Economical recharges with locally accessed agent
- Effective against fires involving many combustible materials and flammable liquids
- Can be stored at low ambient temperature
- Can be customized to discharge either automatically or manually
- Provides a total flooding suppression solution
- Requires no cleanup after a fire event, as the result of agent release
- Poses no threat to the environment (Zero ozone depletion/zero global warming)
- Will not damage protected equipment
- Non-conductive and can be used in environments where sensitive electronic equipment is present
- Safe for use in a wide range of applications where people are present
- Lacks oxidative qualities
- Low loss rate
- Complex pipe networking options
- Selector valves can be used for multiple hazards

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Nitrogen System Features:

Effective. Nitrogen 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%. Nitrogen reduces the oxygen concentration to approximately 12.5%. Nitrogen has a density nearly equivilent to air.
This results in lower loss of agent during and following discharge. Nitrogen mixes uniformally for minimal agent stratification.

Safe. In occupied areas, people can breathe Nitrogen at extinguishing concentrations that are at acceptable levels for human exposure over short periods of time. There are no toxicological factors associated with its use and it will not decompose or produce any by-products when exposed to a flame. A Nitrogen discharge will not create a fogging effect therefore, vision is not compromised or obscured.

Fast-Acting. Most Nitrogen systems are designed to extinguish fires with a minimum agent concentration of 36% within the time prescribed in NFPA 2001.

Green. Nitrogen is an inert gas found naturally in the atmosphere. 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).

Recognized. By the top independent listing and approval agencies including ULC and FM.

Applications for the Nitrogen System:

- Control Rooms
- Rare Book Libraries
- Record Storage Facilities
- Electric Switch Rooms
- Universities and Colleges
- Art Galeries and Museums
- Substations
- Petrochemical Installations
- Telecommunication Center
- Financial Centers and Banks
- Pharmaceutical
- Offshore Oil and Gas Installations
- Medical Facilities

Approved for use with Chemetron Suppress ion Control Units:

- ARIES ®
- ARIES ® NET *Link*
- AEGIS ™

Approvals & Listings

- Factory Mutual (FM)
- Underwriters' Laboratories of Canada (ULC)

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WHDR ™ WET CHEMICAL SYSTEM

24 Hour Protection for Cooking Facilities

The heart and soul of every dining establishment is the kitchen. Equipped with ranges, broilers, fryers and a myriad of other high-temperature cooking appliances, no other environment demands proper fire protection more than today's modern cooking facilities.

The Kidde Fire Systems WHDR system is specifically designed for the challenging demands posed by cooking applications. By offering one of the most flexible system configurations in the industry, Kidde Fire Systems provides efficient, economical protection for all types of cooking facilities and design layouts. Our customized approach allows you to specify the type of detection, control and cylinder sizes to fit your application.

Investing in a Kidde Fire Systems WHDR system helps to enable more than just code compliance for your appliance (UL300, NFPA 96 & 17A); it provides automatic, round the clock protection from the devastating consequences of fire.

Why Choose the WHDR System?

Economical. Cost-effective, pre-engineered system simplifies design and installation.

Easy-to-maintain. Semi-annual system inspections and routine maintenance per NFPA regulations are performed quickly and efficiently by your local Kidde Fire Systems distributor.

Proven Protection. Providing the best in kitchen fire protection for over 40 years, the Kidde Fire Systems IND System is the choice of countless restaurants and cooking facilities worldwide.

24/7 Support. Designed, installed and serviced by our factory trained, global network of Kidde Fire Systems distributors.

Customized Solution. System design and installation provided by your local distributor, delivering a superior code-compliant solution which is tailored to your fire protection needs.

Robust Design. Meets strict UL 300 fire test criteria, suppressing fire without the need for secondary agent or system connections.

Reliable. Every WHDR system is backed by the Kidde Fire Systems warranty.

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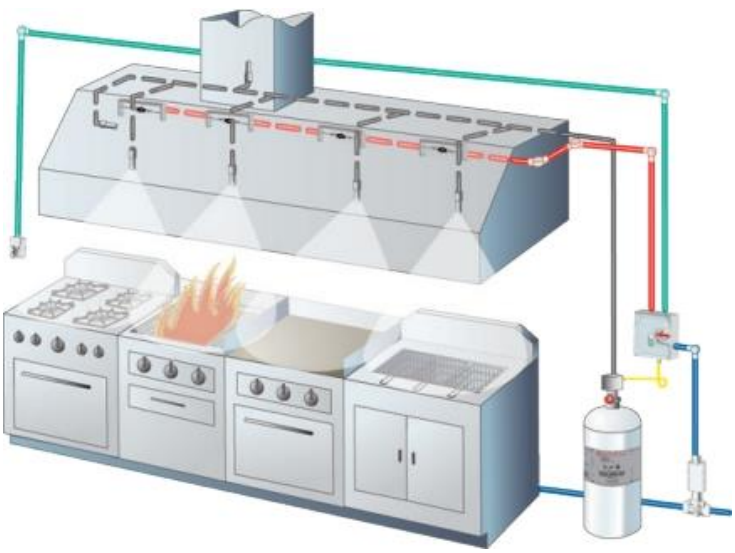
How Do WHDR Wet Chemical Systems Work?

1. Fire is detected by the Kidde Fire Systems mechanical link, or electric Detect-A-Fire® (DAF), or the system is manually activated by a remote pull station.
2. The XV ™ Control System simultaneously actuates up to 20 pressurized agent storage containers, shuts down fuel and power sources to the appliances and activates the building fire alarm.
3. The Kidde Fire Systems APC wet chemical agent, designed specifically for the challenges posed by oil and grease in a kitchen environment, is propelled through the system piping by the stored pressure container.
4. The Kidde Fire Systems APC agent discharges from strategically positioned nozzles protecting the hood, duct and appliances. APC agent quickly suppresses the flames and forms a protective layer that not only extinguishes the fire, but also prevents re-ignition.

WHDR System Components:

- XV Control System
- WHDR Agent Storage Container
- Thermo Bulb, Fusible Link or DAF Detection
- Manual Remote Release
- Mechanical or Electric Gas Valve
- Customized Discharge Nozzles
- APC Wet Chemical Agent



Kidde Fire Systems

Customers Protected:

- Fast Food Chains
- Hotels & Lodging
- Fine Dining
- Healthcare Facilities
- Sports Stadiums and Complexes
- Casual & Family Dining
- Marine Galleys
- Educational Facilities
- Supermarkets/Groceries
- Institutional Facilities
- Diners
- Corporate Cafeterias
- Nursing Homes
- Shopping Mall Food Courts

Applications Protected:

- Hoods, Plenums & Filters
- Duct Work
- Fryers
- Ranges
- Char-broilers
- Woks
- Griddles
- Salamanders
- Tilt Skillets
- and more…

Approvals & Listings:

- UL Listed
- ULC Listed
- NYC Fire Department (COA)
- ABS Type Approved
- DNV Type Approved

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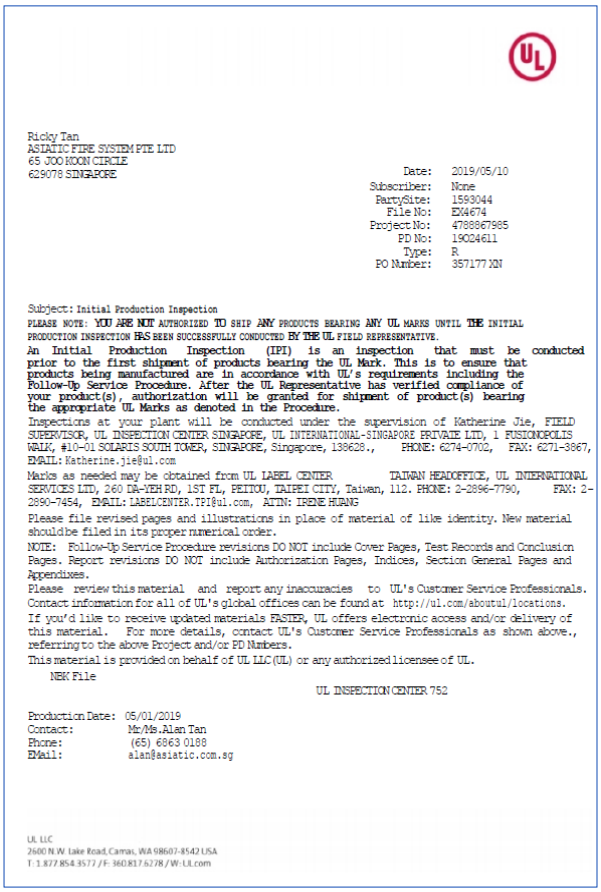
Accreditation: Underwriter's Laboratories – UL Certification



Ricky Tan
ASIATIC FIRE SYSTEM PTE LTD
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Date: 2019/05/10
Subscriber: None
PartySite: 1593044
File No: EX4674
Project No: 4788867985
PD No: 19024611
Type: R
PO Number: 357177 XN

Subject: Initial Production Inspection

PLEASE NOTE: YOU ARE NOT AUTHORIZED TO SHIP ANY PRODUCTS BEARING ANY UL MARKS UNTIL THE INITIAL PRODUCTION INSPECTION HAS BEEN SUCCESSFULLY CONDUCTED BY THE UL FIELD REPRESENTATIVE.

An Initial Production Inspection (IPI) is an inspection that must be conducted prior to the first shipment of products bearing the UL Mark. This is to ensure that products being manufactured are in accordance with UL's requirements including the Follow-Up Service Procedure. After the UL Representative has verified compliance of your product(s), authorization will be granted for shipment of product(s) bearing the appropriate UL Marks as denoted in the Procedure.

Inspections at your plant will be conducted under the supervision of Katherine Jie, FIELD SUPERVISOR, UL INSPECTION CENTER SINGAPORE, UL INTERNATIONAL-SINGAPORE PRIVATE LTD, 1 FUSIONOPOLIS WALK, #10-01 SOLARIS SOUTH TOWER, SINGAPORE, Singapore, 138628., PHONE: 6274-0702, FAX: 6271-3867, EMAIL: Katherine.jie@ul.com

Marks as needed may be obtained from UL LABEL CENTER TAIWAN HEADOFFICE, UL INTERNATIONAL SERVICES LTD, 260 DA-YEH RD, 1ST FL, PEITOU, TAIPEI CITY, Taiwan, 112. PHONE: 2-2896-7790, FAX: 2-2890-7454, EMAIL: LABELCENTER.TPI@ul.com, ATTN: IRENE HUANG

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

Please review this material and report any inaccuracies to UL's Customer Service Professionals. Contact information for all of UL's global offices can be found at http://ul.com/aboutul/locations.

If you'd like to receive updated materials FASTER, UL offers electronic access and/or delivery of this material. For more details, contact UL's Customer Service Professionals as shown above., referring to the above Project and/or PD Numbers.

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NEK File

UL INSPECTION CENTER 752

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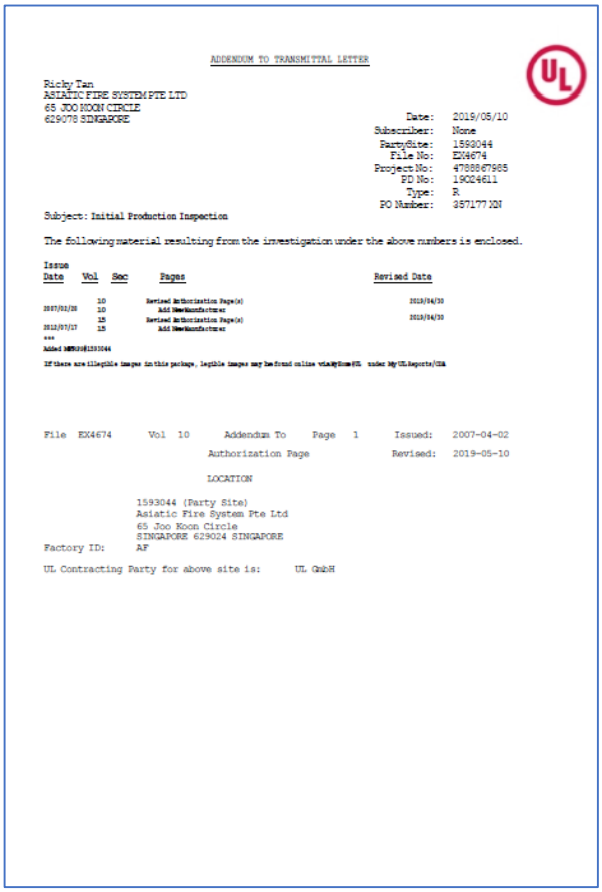
2600 N.W. Lake Road, Camas, WA 98607-8542 USA
T: 1.877.854.3577 / F: 360.817.6278 / W: UL.com



ADDENDUM TO TRANSMITTAL LETTER

Ricky Tan
ASIATIC FIRE SYSTEM PTE LTD
65 JOO KOON CIRCLE
629078 SINGAPORE

Date: 2019/05/10
Subscriber: None
PartySite: 1593044
File No: EX4674
Project No: 4788867985
PD No: 19024611
Type: R
PO Number: 357177 XN

Subject: Initial Production Inspection

The following material resulting from the investigation under the above numbers is enclosed.

Issue Date	Vol	Sec	Pages	Revised Date
2007/02/26	10		Revised Authorization Page(s)	2019/04/30
	10		Add New Manufacturer	
2012/07/17	15		Revised Authorization Page(s)	2019/04/30
	15		Add New Manufacturer	

***

Added MP930@1593044

If there are illegible images in this package, legible images may be found online via MyFloorFile under MyULReports/USA

File EX4674 Vol 10 Addendum To Page 1 Issued: 2007-04-02
Authorization Page Revised: 2019-05-10

LOCATION

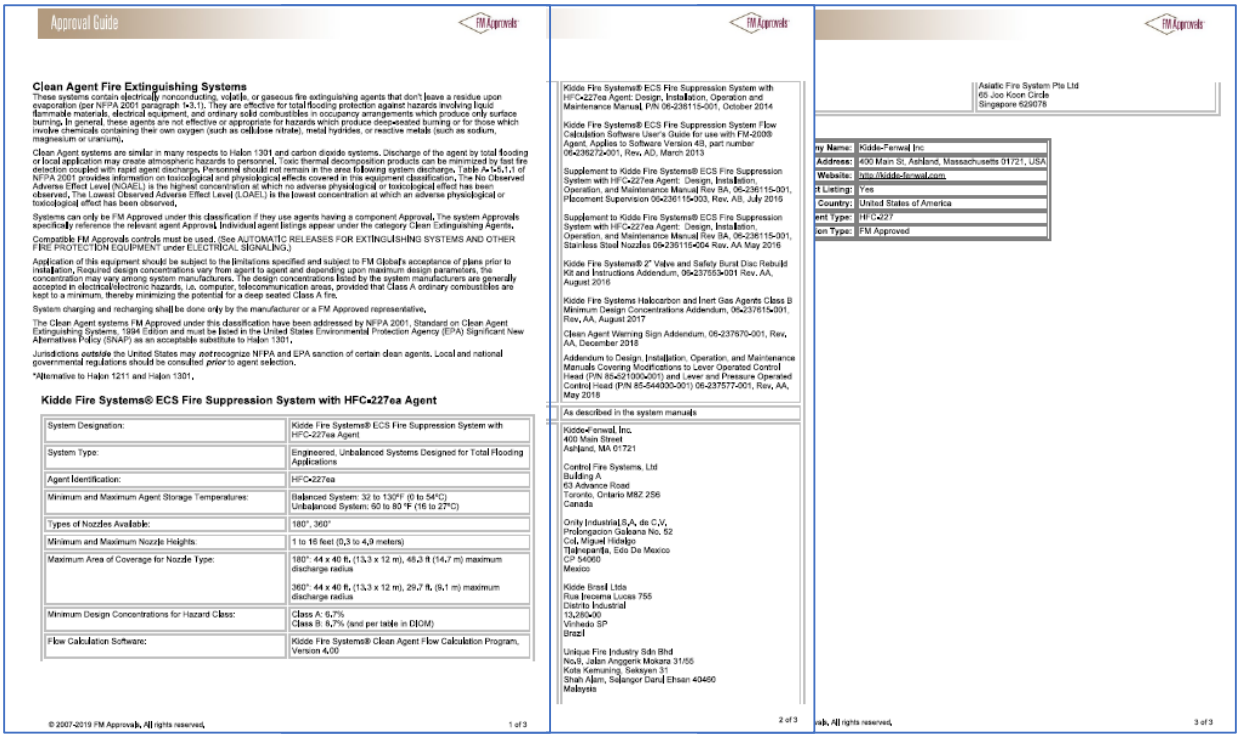
1593044 (Party Site)
Asiatic Fire System Pte Ltd
65 Joo Koon Circle
SINGAPORE 629024 SINGAPORE
Factory ID: AF

UL Contracting Party for above site is: UL GmbH

UL Certification under Kidde-Fenwal UL Listing EX 4674 Registration:

- First Fill Station was inspected by UL Singapore Engineer on 30th April 2019
- Received of letter for official listing date on the 10th May 2019

Accreditation: Factory Mutual – FM Certification



Approval Guide

Clean Agent Fire Extinguishing Systems

These systems contain electrically nonconducting, volatile, or gaseous fire extinguishing agents that don't leave a residue upon evaporation (per NFPA 2001 paragraph 1-3.1). They are effective for total flooding protection against hazards involving liquid flammable materials, electrical equipment, and ordinary solid combustibles in occupancy arrangements which produce only surface burning. In general, these agents are not effective or appropriate for hazards which produce deep-seated burning or for those which involve chemicals containing their own oxygen (such as cellulose nitrate), metal hydrides, or reactive metals (such as sodium, magnesium or uranium).

Clean Agent systems are similar in many respects to Halon 1301 and carbon dioxide systems. Discharge of the agent by total flooding or local application may create atmospheric hazards to personnel. Toxic thermal decomposition products can be minimized by fast fire detection coupled with rapid agent discharge. Personnel should not remain in the area following system discharge. Table A-5.1.1 of NFPA 2001 provides information on toxicological and physiological effects covered in this equipment classification. The No Observed Adverse Effect Level (NOAEL) is the highest concentration at which no adverse physiological or toxicological effect has been observed. The Lowest Observed Adverse Effect Level (LOAEL) is the lowest concentration at which an adverse physiological or toxicological effect has been observed.

Systems can only be FM Approved under this classification if they use agents having a component Approval. The system Approvals specifically reference the relevant agent Approval. Individual agent listings appear under the category Clean Extinguishing Agents.

Compatible FM Approvals controls must be used. (See AUTOMATIC RELEASES FOR EXTINGUISHING SYSTEMS AND OTHER FIRE PROTECTION EQUIPMENT under ELECTRICAL SIGNALING.)

Application of this equipment should be subject to the limitations specified and subject to FM Global's acceptance of plans prior to installation. Required design concentrations vary from agent to agent and depending upon maximum design parameters, the concentration may vary among system manufacturers. The design concentrations listed by the system manufacturers are generally accepted in electrical/electronic hazards, i.e. computer, telecommunication areas, provided that Class A ordinary combustibles are kept to a minimum, thereby minimizing the potential for a deep seated Class A fire.

System charging and recharging shall be done only by the manufacturer or a FM Approved representative.

The Clean Agent systems FM Approved under this classification have been addressed by NFPA 2001, Standard on Clean Agent Extinguishing Systems, 1994 Edition and must be listed in the United States Environmental Protection Agency (EPA) Significant New Alternatives Policy (SNAP) as an acceptable substitute to Halon 1301.

Jurisdictions *outside* the United States may *not* recognize NFPA and EPA sanction of certain clean agents. Local and national governmental regulations should be consulted *prior* to agent selection.

*Alternative to Halon 1211 and Halon 1301.

Kidde Fire Systems® ECS Fire Suppression System with HFC-227ea Agent

System Designation:	Kidde Fire Systems® ECS Fire Suppression System with HFC-227ea Agent
System Type:	Engineered, Unbalanced Systems Designed for Total Flooding Applications
Agent Identification:	HFC-227ea
Minimum and Maximum Agent Storage Temperatures:	Balanced System: 32 to 130°F (0 to 54°C) Unbalanced System: 60 to 80 °F (16 to 27°C)
Types of Nozzles Available:	180°, 360°
Minimum and Maximum Nozzle Heights:	1 to 16 feet (0,3 to 4,9 meters)
Maximum Area of Coverage for Nozzle Type:	180°: 44 x 40 ft. (13,3 x 12 m), 48,3 ft (14,7 m) maximum discharge radius 360°: 44 x 40 ft. (13,3 x 12 m), 29,7 ft. (9,1 m) maximum discharge radius
Minimum Design Concentrations for Hazard Class:	Class A: 6.7% Class B: 6.7% (and per table in DIOM)
Flow Calculation Software:	Kidde Fire Systems® Clean Agent Flow Calculation Program, Version 4.00

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Kidde Fire Systems® ECS Fire Suppression System with HFC-227ea Agent: Design, Installation, Operation and Maintenance Manual, P/N 06-238115-001, October 2014

Kidde Fire Systems® ECS Fire Suppression System Flow Calculation Software User's Guide for use with FM-2000 Agent. Applies to Software Version 49, part number 06-236272-001, Rev. AD, March 2013

Supplement to Kidde Fire Systems® ECS Fire Suppression System with HFC-227ea Agent: Design, Installation, Operation, and Maintenance Manual Rev BA, 06-238115-001, Placement Supervision 06-236115-003, Rev. AB, July 2015

Supplement to Kidde Fire Systems® ECS Fire Suppression System with HFC-227ea Agent: Design, Installation, Operation, and Maintenance Manual Rev BA, 06-238115-001, Stainless Steel Nozzles 06-236116-004 Rev. AA May 2016

Kidde Fire Systems® 2" Valve and Safety Burst Disc Rebuild Kit and Instructions Addendum, 06-237553-001 Rev. AA, August 2016

Kidde Fire Systems Halocarbon and Inert Gas Agents Class B Minimum Design Concentrations Addendum, 06-237615-001, Rev. AA, August 2017

Clean Agent Warning Sign Addendum, 06-237670-001, Rev. AA, December 2018

Addendum to Design, Installation, Operation, and Maintenance Manuals Covering Modifications to Lever Operated Control Head (P/N 85-521000-001) and Lever and Pressure Operated Control Head (P/N 85-544000-001) 06-237577-001, Rev. AA, May 2018

As described in the system manuals

Kidde-Fenwal, Inc.
400 Main Street
Ashland, MA 01721

Control Fire Systems, Ltd
Building A
63 Advance Road
Toronto, Ontario M8Z 2S6
Canada

Only Industrial,S.A. de C.V.
Prolongacion Galeana No. 52
Col. Miguel Hidalgo
Tlalnepantla, Edo De Mexico
CP 54060
Mexico

Kidde Brasil Ltda
Rua Irecema Lucas 755
Distrito Industrial
13,280-00
Vinhedo SP
Brazil

Unique Fire Industry Sdn Bhd
No.8, Jalan Anggerik Mokara 31/55
Kota Kemuning, Seksyen 31
Shah Alam, Selangor Darul Ehsan 40460
Malaysia

2 of 3

Asiatic Fire System Pte Ltd
65 Joo Koon Circle
Singapore 629078

ny Name:	Kidde-Fenwal Inc
Address:	400 Main St, Ashland, Massachusetts 01721, USA
Website:	http://kidde-fenwal.com
t Listing:	Yes
Country:	United States of America
ent Type:	HFC-227
ion Type:	FM Approved

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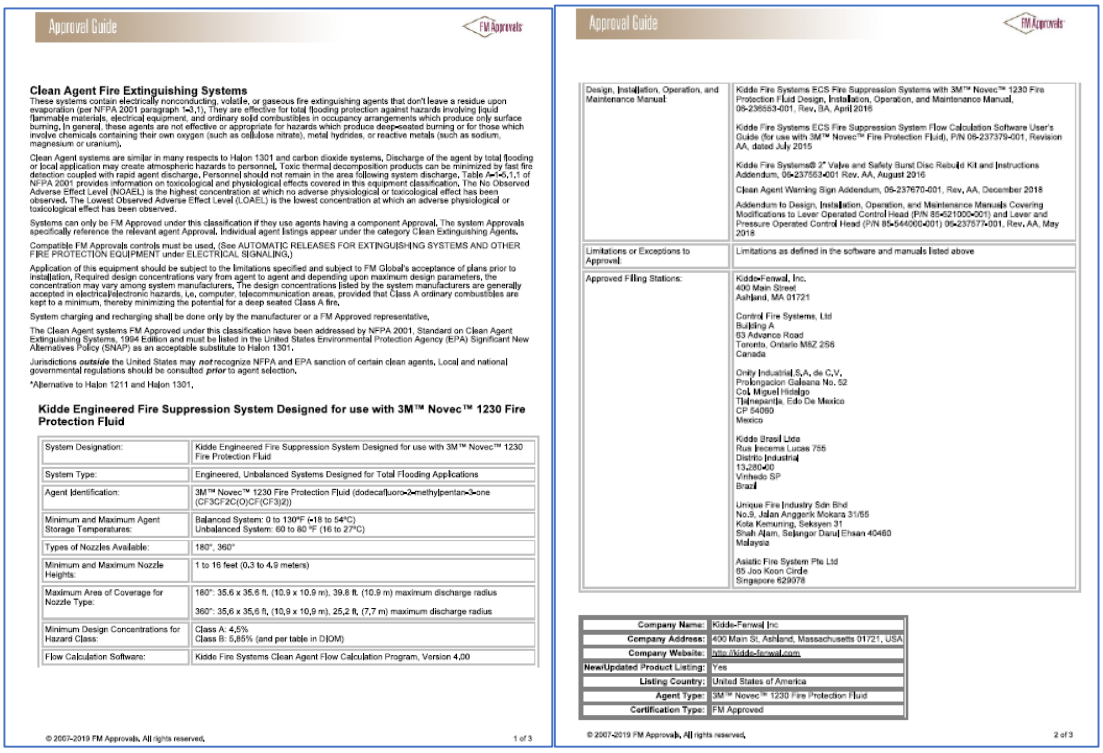

Approval Guide

Clean Agent Fire Extinguishing Systems

These systems contain electrically nonconducting, volatile, or gaseous fire extinguishing agents that don't leave a residue upon evaporation (per NFPA 2001 paragraph 1-3.1). They are effective for total flooding protection against hazards involving liquid flammable materials, electrical equipment, and ordinary solid combustibles in occupancy arrangements which produce only surface burning. In general, these agents are not effective or appropriate for hazards which produce deep-seated burning or for those which involve chemicals containing their own oxygen (such as cellulose nitrate), metal hydrides, or reactive metals (such as sodium, magnesium or uranium).

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Systems can only be FM Approved under this classification if they use agents having a component Approval. The system Approvals specifically reference the relevant agent Approval. Individual agent listings appear under the category Clean Extinguishing Agents.

Compatible FM Approvals controls must be used. (See AUTOMATIC RELEASES FOR EXTINGUISHING SYSTEMS AND OTHER FIRE PROTECTION EQUIPMENT under ELECTRICAL SIGNALING.)

Application of this equipment should be subject to the limitations specified and subject to FM Global's acceptance of plans prior to installation. Required design concentrations vary from agent to agent and depending upon maximum design parameters, the concentration may vary among system manufacturers. The design concentrations listed by the system manufacturers are generally accepted in electrical/electronic hazards, i.e. computer, telecommunication areas, provided that Class A ordinary combustibles are kept to a minimum, thereby minimizing the potential for a deep seated Class A fire.

System charging and recharging shall be done only by the manufacturer or a FM Approved representative.

The Clean Agent systems FM Approved under this classification have been addressed by NFPA 2001, Standard on Clean Agent Extinguishing Systems, 1994 Edition and must be listed in the United States Environmental Protection Agency (EPA) Significant New Alternatives Policy (SNAP) as an acceptable substitute to Halon 1301.

Jurisdictions *outside* the United States may *not* recognize NFPA and EPA sanction of certain clean agents. Local and national governmental regulations should be consulted *prior* to agent selection.

*Alternative to Halon 1211 and Halon 1301.

Kidde Engineered Fire Suppression System Designed for use with 3M™ Novec™ 1230 Fire Protection Fluid

System Designation:	Kidde Engineered Fire Suppression System Designed for use with 3M™ Novec™ 1230 Fire Protection Fluid
System Type:	Engineered, Unbalanced Systems Designed for Total Flooding Applications
Agent Identification:	3M™ Novec™ 1230 Fire Protection Fluid (dodecafluoro-2-methylpentan-3-one (CF3CF2C(O)CF(CF3)2))
Minimum and Maximum Agent Storage Temperatures:	Balanced System: 0 to 130°F (-18 to 54°C) Unbalanced System: 60 to 80 °F (16 to 27°C)
Types of Nozzles Available:	180°, 360°
Minimum and Maximum Nozzle Heights:	1 to 16 feet (0,3 to 4,9 meters)
Maximum Area of Coverage for Nozzle Type:	180°: 35,6 x 35,6 ft. (10,9 x 10,9 m), 39,8 ft. (10,9 m) maximum discharge radius 360°: 35,6 x 35,6 ft. (10,9 x 10,9 m), 25,2 ft. (7,7 m) maximum discharge radius
Minimum Design Concentrations for Hazard Class:	Class A: 4.5% Class B: 5,85% (and per table in DIOM)
Flow Calculation Software:	Kidde Fire Systems Clean Agent Flow Calculation Program, Version 4.00

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Approval Guide

Design, Installation, Operation, and Maintenance Manual:	Kidde Fire Systems ECS Fire Suppression Systems with 3M™ Novec™ 1230 Fire Protection Fluid Design, Installation, Operation, and Maintenance Manual, 06-236553-001, Rev. BA, April 2016 Kidde Fire Systems ECS Fire Suppression System Flow Calculation Software User's Guide (for use with 3M™ Novec™ Fire Protection Fluid), P/N 06-237379-001, Revision AA, dated July 2015 Kidde Fire Systems® 2" Valve and Safety Burst Disc Rebuild Kit and Instructions Addendum, 06-237553-001 Rev. AA, August 2016 Clean Agent Warning Sign Addendum, 06-237670-001, Rev. AA, December 2018 Addendum to Design, Installation, Operation, and Maintenance Manuals Covering Modifications to Lever Operated Control Head (P/N 85-521000-001) and Lever and Pressure Operated Control Head (P/N 85-544000-001) 06-237577-001, Rev. AA, May 2018
Limitations or Exceptions to Approval:	Limitations as defined in the software and manuals listed above
Approved Filling Stations:	Kidde-Fenwal, Inc. 400 Main Street Ashland, MA 01721 Control Fire Systems, Ltd Building A 63 Advance Road Toronto, Ontario M8Z 2S6 Canada Only Industrial,S.A. de C.V. Prolongacion Galeana No. 52 Col. Miguel Hidalgo Tlalnepantla, Edo De Mexico CP 54060 Mexico Kidde Brasil Ltda Rua Irecema Lucas 755 Distrito Industrial 13,280-00 Vinhedo SP Brazil Unique Fire Industry Sdn Bhd No.8, Jalan Anggerik Mokara 31/55 Kota Kemuning, Seksyen 31 Shah Alam, Selangor Darul Ehsan 40460 Malaysia Asiatic Fire System Pte Ltd 65 Joo Koon Circle Singapore 629078

Company Name:	Kidde-Fenwal Inc
Company Address:	400 Main St, Ashland, Massachusetts 01721, USA
Company Website:	http://kidde-fenwal.com
New/Updated Product Listing:	Yes
Listing Country:	United States of America
Agent Type:	3M™ Novec™ 1230 Fire Protection Fluid
Certification Type:	FM Approved

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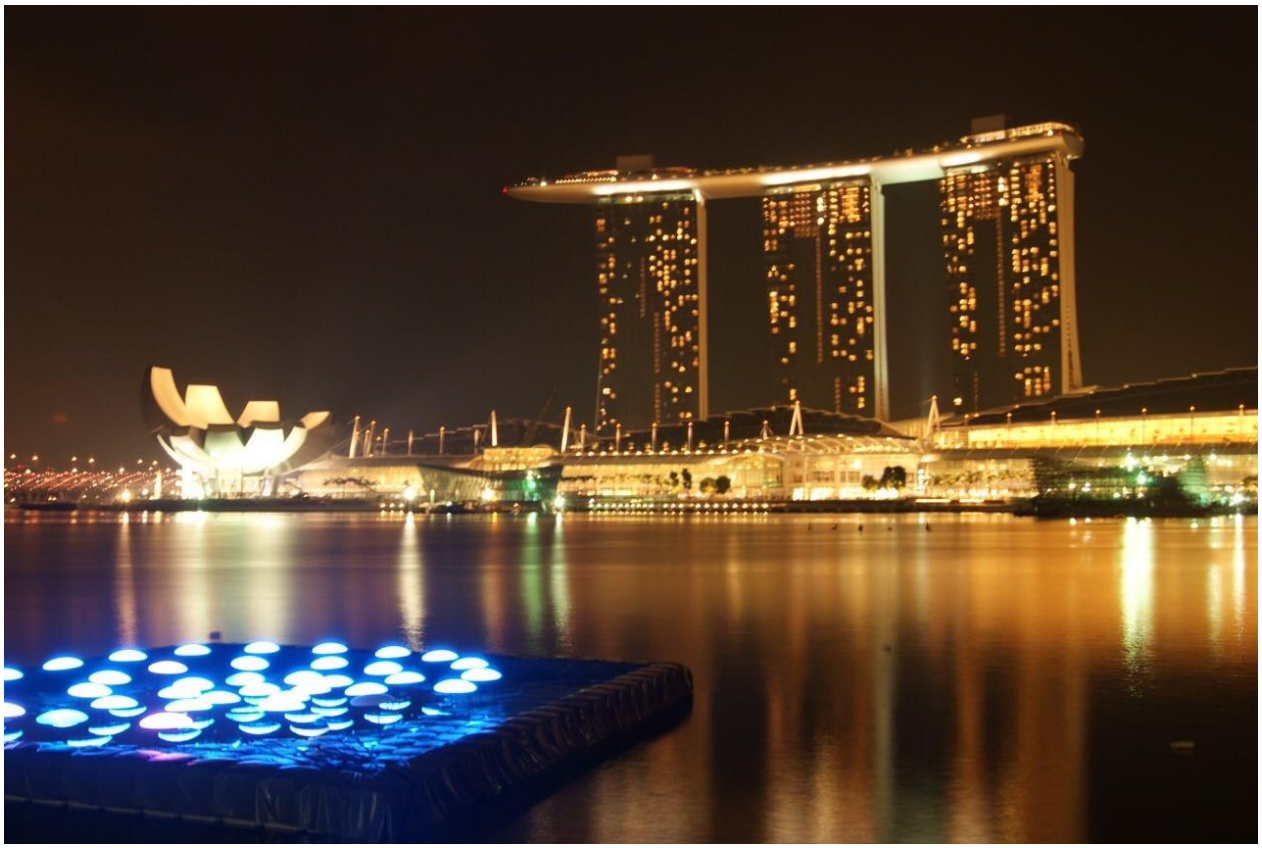
Kidde Fire Systems

FM Approval under Kidde-Fenwal Registration:

- First Fill Station was inspected by FM Approval Engineer on 13th June 2019
- Received confirmation of approval on 9th July 2019, currently official certificate was received on 02th August 2019



Asiatic Fire System Pte Ltd
No. 65 Joo Koon Circle,
Singapore 629078
Email: asiatic@asiatic.com.sg