



FIRE EQUIPMENT · 27

Fire Suppression

Engineered fire-suppression enquiries across the equipment categories listed in MLC's portfolio.



Ignite Your Safety with Cutting-Edge Fire Detection Solutions for a Healthier Environment!

- CO2 Fire Suppression System
- TDK Tubing Suppression
- Advance Fire Extinguishing solutions

Kitchen - Wet Chemical Based:





When a fire occurs, the point on the pressurized FDT nearest the heat source will burst at 175 deg C. The sudden tube depressurization actuates the special pressure differential valve and instantly floods the cooking area with Class F extinguishing agent. The fire is quickly suppressed just moments after it began..

(NOVEC -1230 / FK 5-1-12)

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QEHs AT ONE PLACE

NOVEC -1230 / FK 5-1-12

CLEAN AGENT FIRE SUPPRESSION SYSTEM

FAST | CLEAN | SAFE | RELIABLE

- RAPID FIRE SUPPRESSION**
- CLEAN & RESIDUE FREE**
- SAFE FOR PEOPLE**
- IDEAL FOR SENSITIVE EQUIPMENT**
- ENVIRONMENTALLY FRIENDLY (Low GWP)**

IDEAL APPLICATIONS

- DATA CENTERS
- ELECTRICAL ROOMS
- CONTROL ROOMS
- TELECOMMUNICATION ROOMS

NOVEC -1230 DISCHARGE **FK 5-1-12 DISCHARGE**

FAST ACTING **NON-CONDUCTIVE** **ZERO OZONE DEPLETION POTENTIAL** **LOW GLOBAL WARMING POTENTIAL**

When the automatic detection system is triggered by the heat of the flames, the Novec 1230 fire protection fluid (also known as FK 5-1-12) in the fire suppression system is designed to quickly discharge and reach the right amount needed to put out the fire within 10 seconds.

What is FK-5-1-12 extinguishing agent?

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FK-5-1-12

EXTINGUISHING AGENT

CLEAN | SAFE | EFFECTIVE | ENVIRONMENT FRIENDLY

- FAST FIRE SUPPRESSION**
- CLEAN RESIDUE FREE**
- SAFE FOR PEOPLE & EQUIPMENT**
- NON-CONDUCTIVE (ELECTRICALLY SAFE)**
- LOW GLOBAL WARMING POTENTIAL (GWP - 1)**
- ZERO OZONE DEPLETION POTENTIAL (ODP)**

IDEAL APPLICATIONS

- DATA CENTERS & SERVER ROOMS
- ELECTRICAL ROOMS & SWITCHGEARS
- CONTROL ROOMS
- TELECOMMUNICATION FACILITIES
- ARCHIVES & VALUABLE ASSETS
- CRITICAL INFRASTRUCTURE

FK-5-1-12 (C₅H₂F₁₂)

RAPID ACTING **NO RESIDUE AFTER DISCHARGE** **PROTECTS CRITICAL ASSETS** **ENVIRONMENTALLY FRIENDLY**

FK-5-1-12 is an environmentally sustainable clean extinguishing agent that has undergone considerable testing to determine its fire performance characteristics as a clean extinguishing agent.



Advantage:

MLC QEHs AT ONE PLACE

FIRE SUPPRESSION SYSTEM

DESIGN | SUPPLY | INSTALLATION | TESTING & COMMISSIONING | MAINTENANCE

- UL LISTED** (UL logo)
- FM LISTED** (FM logo)
- NFPA LISTED** (NFPA logo)

- ✓ UL LISTED EQUIPMENT
- ✓ FM APPROVED PRODUCTS
- ✓ NFPA COMPLIANT DESIGN
- ✓ GLOBAL STANDARDS
- ✓ SAFE & RELIABLE
- ✓ PROFESSIONAL INSTALLATION
- ✓ REGULAR TESTING & MAINTENANCE

TYPES OF FIRE SUPPRESSION SYSTEMS

CLEAN AGENT SYSTEM (NOVEC-1230 / FK-5-1-12 / FM-200)	WATER BASED SYSTEM (FIRE SPRINKLER)	KITCHEN WET CHEMICAL SUPPRESSION SYSTEM	FOAM FIRE SUPPRESSION SYSTEM	GAS SUPPRESSION SYSTEM (CO₂)	INERT GAS SYSTEM (IG-55 / IG-541)	VEHICLE FIRE SUPPRESSION SYSTEM	WATER MIST SUPPRESSION SYSTEM	AEROSOL FIRE SUPPRESSION SYSTEM
UL FM NFPA	UL FM NFPA	UL FM NFPA	UL FM NFPA	UL FM NFPA	UL FM NFPA	UL FM NFPA	UL FM NFPA	UL FM NFPA

APPLICATIONS

DATA CENTERS	COMMERCIAL BUILDINGS	INDUSTRIAL FACILITIES
WAREHOUSES & STORAGE	POWER & ELECTRICAL ROOMS	VEHICLES & HEAVY EQUIPMENT

- Very swift fire suppression. Reach extinguishing level 10s.
- Safe to people. People are safe when exposed to the FK-5-1-12/Novec 1230 gas discharge level.
- Low extinguishing concentration. Nearly no obscurity to vision during person evacuation.
- Easy to clean. No residue left, and minimizes damage to sensitive equipment.
- Environmentally friendly. Zero ozone depletion potential and zero global warming potential.
- Simple installation, with small storage space.

FM-200:

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FM-200 FIRE SUPPRESSION SYSTEM

CLEAN AGENT - RAPID - RELIABLE - SAFE

FM-200 CLEAN AGENT (HFC-227ea)

- RAPID FIRE SUPPRESSION**
- CLEAN RESIDUE FREE**
- SAFE FOR PEOPLE & EQUIPMENT**
- NON-CONDUCTIVE (ELECTRICALLY SAFE)**
- LOW GLOBAL WARMING POTENTIAL (GWP ~ 0.002)**
- ZERO OZONE DEPLETION POTENTIAL (ODP = 0)**

IDEAL APPLICATIONS

DATA CENTERS & SERVER ROOMS	ELECTRICAL ROOMS & SWITCHGEARS	CONTROL ROOMS	TELECOMMUNICATION FACILITIES	ARCHIVES & VALUABLE ASSETS	CRITICAL INFRASTRUCTURE
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FAST ACTING **RELIABLE PERFORMANCE** **ENVIRONMENTALLY FRIENDLY**

FM-200™, also commonly known as HFC-227ea, is a clean agent fire suppressant for Class A, B, and C fires and meets NFPA Standard 2001 Clean Agent Fire Extinguishing Systems. Clean agents are fast and effective in suppressing fires, are safe in occupied spaces, and do not leave a residue.



How Does FM-200™ Work

FM-200™ suppresses fire by disrupting the fire triangle. The fire triangle is made up of heat, oxygen, and a fuel source, and by removing one of these elements, the fire is extinguished. FM-200™ removes the heat or free radicals, which interferes with the fire triangle's chemical reaction to extinguish the fire. Clean agent fire suppression systems, like ones using FM-200™, can achieve fire extinguishing concentrations in 10 seconds or less.

Advantage:

FM-200™ is a clean agent that is safe around people; therefore, FM-200™ fire suppression systems are safe to install in occupied spaces.

When an FM-200™ fire suppression system activates to put out a fire, no residue is left behind, and it is safe for equipment, electronics, and machinery.

Compared to other clean agents like 3M™ Novec™ 1230 Fire Protection Fluid, FM-200™ is a slightly more cost-effective option. Because of the small amount of FM-200™ required to suppress a fire, smaller or fewer cylinders are needed when compared to other agents like 3M Novec 1230 fluid.

Automatic Fire Suppression System for Vehicles

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FIRE SUPPRESSION SYSTEM FOR VEHICLES

EARLY DETECTION | RAPID SUPPRESSION | MAXIMUM PROTECTION

- AUTOMATIC FIRE DETECTION & SUPPRESSION
- PROTECTS PEOPLE, VEHICLES & EQUIPMENT
- SUITABLE FOR HARSH & EXTREME ENVIRONMENTS
- FAST RESPONSE
- MINIMIZES DOWNTIME
- RELIABLE & LOW MAINTENANCE

APPLICATIONS

- MINING VEHICLES (Dumpers, Haul Trucks)
- CONSTRUCTION EQUIPMENT (Excavators, Loaders)
- GENERATORS & ENGINE COMPARTMENTS
- BUSES & COMMERCIAL VEHICLES
- TRUCKS & FLEETS
- AGRICULTURAL MACHINERY
- FORKLIFTS & MATERIAL HANDLING
- MARINE & PORT EQUIPMENT

Yes, it's quite possible that vehicle fires can occur at any time, even when the vehicle is not in use. In this case, the vehicle fire suppression system detects a fire automatically and suppresses it in minutes. This early detection is vital not only for the safety of the driver but also for the longevity of your business and the protection of other vehicles.

MLC fire suppression systems are designed to warn the operator, and at the same time, suppress the fire, protecting both vehicles and drivers. The automatic fire suppression systems suppress the fire in its earliest stages before it fully spreads into highly combustible areas, and for this reason, the damage is limited, and equipment downtime is held to a minimum.

The automatic fire suppression system is a reliable yet effective firefighting system ideally used to extinguish vehicle fires. This type of fire suppression system is designed with detection wires wrapped around the perimeter of the vehicle's engine. Now a question arises, how it works? When the insulation on one wire melts at the case of reaching a temperature of 356 or higher, the melted wire touches the other wire, and a message is sent to the control panel to dump the system and extinguish the fire



immediately.

Vehicle Fire Suppression System Caters To

- Mining
- Transportation
- Aviation
- Forestry
- Metal processing
- Agribusiness
- Power generation/utilities
- Waste processing

Automatic Fire Suppression and its Features

The infographic features the MLC logo and tagline 'QEHs AT ONE PLACE' at the top left. The main title 'FIRE SPRINKLER SYSTEM' is prominently displayed in large, bold, red and black letters. Below the title, a subtitle reads 'AUTOMATIC FIRE PROTECTION FOR LIFE, PROPERTY & BUSINESS CONTINUITY'. A central image shows a red fire sprinkler head spraying water. To the right of the image, a vertical list of services includes: DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING, and MAINTENANCE, each preceded by a checkmark icon. Below the main title, six icons represent key features: AUTOMATIC FIRE DETECTION & SUPPRESSION, FAST RESPONSE, PROTECTS LIFE & PROPERTY, RELIABLE & LOW MAINTENANCE, COST EFFECTIVE, and ENVIRONMENT FRIENDLY (WATER BASED). The bottom section is divided into two parts: 'TYPES OF FIRE SPRINKLER SYSTEMS' and 'APPLICATIONS'. The 'TYPES' section shows six types of systems with corresponding images: WET PIPE SPRINKLER SYSTEM, DRY PIPE SPRINKLER SYSTEM, PRE-ACTION SPRINKLER SYSTEM, DELUGE SPRINKLER SYSTEM, FOAM WATER SPRINKLER SYSTEM, and RESIDENTIAL SPRINKLER SYSTEM. The 'APPLICATIONS' section shows six types of buildings: COMMERCIAL BUILDINGS, INDUSTRIAL FACILITIES, WAREHOUSES & STORAGE, DATA CENTERS, MALLS & PUBLIC PLACES, and HOTELS & HOSPITALITY.

MLC is one of the reliable vehicle fire suppression system suppliers providing the best fire suppression services to varied clients. Our fire suppression equipment for vehicle fires that uses fire suppression chemicals to extinguish the fire efficiently. It is known as the best fire suppression system and appreciated due to the following list of features:

- Easy installation directly inside engine compartments of vehicles
- Early fire detection
- Instant fire suppression capacity just moments after the fire began
- Fast, effective fire suppression in a small, design-friendly footprint
- Able to protect the engine compartment
- Highly dependable with no electricity required

Frequently Asked Questions

Q. Which fire suppression systems does MLC provide?

CO2 suppression, TDK tubing suppression, wet chemical systems for kitchens, Novec 1230 (FK-5-1-12) and FM-200 clean agent systems, and automatic fire suppression for vehicles.



Q. How quickly do clean agent systems put out a fire?

Novec 1230 and FM-200 systems reach extinguishing level within 10 seconds.

Q. Are Novec 1230 and FM-200 safe in occupied spaces?

Yes. Both are safe for people at their discharge levels and leave no residue, so they do not damage sensitive equipment.

Q. How does the kitchen wet chemical system work?

The pressurised detection tube bursts at 175°C at the point nearest the heat, and the cooking area is instantly flooded with a Class F extinguishing agent.

Q. How does the vehicle fire suppression system detect a fire?

Detection wires run around the engine compartment. At 356°F or higher the insulation melts, the wires touch, and the control panel releases the extinguishing agent. No electricity is required.

Q. Which industries use vehicle fire suppression?

Mining, transportation, aviation, forestry, metal processing, agribusiness, power generation and utilities, and waste processing.

Useful details to share when you enquire

- Building layouts and the equipment inventory
- Existing system drawings and service records
- Installation, supply or maintenance requirements

TALK TO MLC

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