



# COLD FIRE®

*Proud to provide a line of effective, environmentally friendly, and sustainable fire safety products.*

**NON-TOXIC . SAFE . EFFECTIVE**



**Environment Safety & Security Co.**



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Marina Twin Tower B,  
Lusail City, Doha Qatar



## **COLD FIRE® SUPPRESSANT**

### **The Ultimate Firefighting Solution**

**Cold Fire®** is an innovative fire suppressant that has revolutionized firefighting by offering a safer, more effective, and environmentally friendly alternative to traditional methods. It is a UL Listed Wetting Agent that extinguishes fires faster, with less water, and minimal damage to property.

**Cold Fire®** is the future of firefighting. Its unparalleled effectiveness, combined with its environmental benefits, makes it the go-to solution for modern firefighting challenges. Whether it's for industrial use or personal safety, Cold Fire provides the assurance that you are using the best tool available to combat fires.

### **HOW IT WORKS**

**Cold Fire®** suppresses fires by removing heat and the fuel sources from the fire tetrahedron, preventing re-ignition. Its rapid cooling effect is 21 times faster than water, encapsulating the fuel source and reducing hydrocarbon smoke.

### **ENVIRONMENTAL IMPACT**

**Cold Fire®** is completely 'green' and non-toxic. It is registered by the US EPA on their SNAP (Significantly New Alternative Products) Program and is PFAS/PFOA free. This makes it a responsible choice for firefighting in diverse environments.



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**Cold Fire®** is an environmentally friendly fire extinguishing agent, leading the way in firefighting technology, and revolutionizing the way first responders combat fires. Cold Fire® gets its name from its extraordinary ability to remove heat and hydrocarbon fuel source from the fire tetrahedron. The suppressants in Cold Fire® use water as a catalyst to penetrate and extinguish the fire more rapidly, using less water and thereby reducing water damage and water supply needs.



### Why use Cold Fire®?

-  UL Classified Wetting Agent for Class A and B fires
-  Can be used for Class D, K and C fires with appropriate extinguishing application & equipment.
-  EPA-SNAP (Significantly New Alternative Policy Program) listed as an acceptable Halon replacement
-  PFAS Free
-  Non-toxic & noncorrosive
-  Biodegradable
-  Unique thermal insulation barrier property
-  Prevent reignition
-  Encapsulates and breaks down hydrocarbons; thereby reducing hydrocarbon smoke and increasing visibility
-  Enhances the penetration capability of water
-  No messy clean-up
-  Indefinite shelf life when stored in closed containers- store in your booster tank, water pressured units or closed loop systems for use anytime
-  Non-slip







### Cold Fire® Certification & Approvals

-  **UL CLASSIFIED**
-  **C-UL LISTED:** In compliance with ULC Subj. C175
-  **INTERNATIONAL CREDENTIALS:** Certified by various international bodies including the Instituto Del Fuego in Chile for Class A, B, C, K fires.





## Cold Fire® Suppressant vs. Traditional Fire Extinguisher

DIFFERENT TYPE OF FIRE EXTINGUISHERS						
						
		COLD FIRE SUPPRESSANT	WATER FIRE EXTINGUISHER	FOAM FIRE EXTINGUISHER	DRY POWER FIRE EXTINGUISHER	CO2 FIRE EXTINGUISHER
TYPES OF FIRE	Class A	✓	✓	✓	✓	
	Class B	✓		✓	✓	✓
	Class C	✓			✓	✓
	Class D	✓				
	Class K	✓				✓
						
						WET CHEMICAL FIRE EXTINGUISHER

## 🔥 Cold Fire® Suppression Systems vs. Traditional Fire Extinguishers

Fire suppression systems like Cold Fire® are designed for automatic fire control and are particularly effective in environments where water-based approaches might be ineffective or damaging. They utilize specialized agents such as CO2, dry chemicals, wet chemicals, and clean agents tailored to combat specific fire types.

## 🔥 Cold Fire® A Halon Alternative

Cold Fire® is a UL Listed Wetting Agent for Class A and B fires and is considered an acceptable alternative to halon under the EPA's SNAP program. It is non-toxic, non-corrosive, and offers an unprecedented cooling effect, making it suitable for total-flooding and streaming applications.

## 🔥 Environmental Considerations

Cold Fire® is environmentally friendly and non-toxic, posing no health risk to workers, crew members, or passengers. It has successfully completed extensive toxicity, corrosivity, and biodegradability testing.





## Cold Fire® Suppressant vs. Traditional Fire Extinguisher

### Effectiveness

Cold Fire® works by removing the heat from the fire triangle and immediately bringing the fire below its flash point. It also encapsulates the fuel source, preventing the possibility of reignition.

### Comparison with AFFF

Cold Fire® is advantageous compared to AFFF (Aqueous Film Forming Foam) because if the foam blanket of AFFF is disrupted, the vapor of the fuel underneath can easily re-ignite. Cold Fire®, on the other hand, prevents re-ignition even if the foam blanket is disturbed.

### Manual vs. Automated Response

Traditional fire extinguishers require manual operation and are practical for smaller fires. In contrast, fire suppression systems like Cold Fire® offer a quick, automated response, making them suitable for larger or high-hazard settings.

### Color Coding

Cold Fire® suppressant does not follow the traditional color-coding system as it is a specialized agent. It is typically clear in composition and is often stored in containers that may not have the color-coding associated with traditional fire extinguishers. The packaging or labeling of Cold Fire® products may include information about its applications and certifications, but not necessarily a color code for fire class identification. The color-coding system for traditional fire extinguishers is standardized to allow quick and correct identification in case of a fire, which is crucial for safety. Cold Fire®, being a more universal agent, does not adhere to this system and is identified by its clear appearance and labeling rather than a color code.







## Cold Fire® Suppressant vs. Traditional Fire Extinguisher

### Conclusion

**Cold Fire®** suppressant offers several advantages over traditional fire extinguishers, including environmental friendliness, non-toxicity, and effectiveness in preventing re-ignition. It is a versatile solution that can be used in various settings, from industrial to personal safety.

This comparison should help you understand the unique benefits of Cold Fire® suppressant and how it stands out from other fire extinguishing solutions.

ADVANTAGE	COLD FIRE	vs	TRADITIONAL FIRE EXTINGUISHER
Eco-Friendly & Environment Friendly	✓		✗
Surface Cooling Effect	✓		✗
Effectiveness on All Fire Classes	✓		✗
Easy to Clean	✓		✗
Organic Product	✓		✗
Prevents Reignition	✓		✗
Non-Toxic & Safe for People, Responders & Environment	✓		✗
Provides Thermal Barrier	✓		✗
Biodegradable	✓		✗
Product Expiration	✗		✓
Non-corrosive	✓		✗
Suppresses toxic fumes or CO2 smoke from fire	✓		✗
Minimize Damage & Reduce Risk	✓		✗





# COLD FIRE® FIRE SUPPRESSION PRODUCTS



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Sizes: 1kg & 4kg



Material: Stainless Steel



ES01-01-00-SS



ES01-04-00-SS

Product Code	ES01-01-00-SS	ES01-04-00-SS
Out-diameter (mm)	Φ 88	Φ 140
Cylinder high (mm)	277	390
Cylinder weight (kg)	0.68	1.70
Full weight (kg)	2.2	6.8
Capacity (L)	1.52	5.1
Filling	Coldfire Wetting Agent	Coldfire Wetting Agent
Temperature range (°C)	0~55	0~60
Working Pressure (bar)	15	15
Test Pressure (bar)	30	30
Discharge Time – Approx (s)	≥6s	≥14s
Fire Class	A,B,C,D,K	A,B,C,D,K





Sizes: 6kg, 9kg, 12kg



Material: Stainless Steel



ES01-06-00-SS



ES01-09-00-SS



ES01-012-00-SS

Product Code	ES01-06-00-S	ES01-09-00-S	ES01-012-00-S
Out-diameter (mm)	Φ 164	Φ 185	Φ 188
Cylinder high (mm)	433	453	567
Cylinder weight (kg)	3.61	4.28	4.40
Full weight (kg)	10.22	14.5	17.5
Capacity (L)	9.6	11.6	13.5
Filling	Coldfire Wetting Agent	Coldfire Wetting Agent	Coldfire Wetting Agent
Temperature range (°C)	0~60	0~60	0~60
Working Pressure (bar)	20	20	20
Test Pressure (bar)	30	30	30
Discharge Time – Approx (s)	≥15s	≥25s	≥35s
Fire Class	A,B,C,D,K	A,B,C,D,K	A,B,C,D,K



Sizes: 25 kg & 50kg



Material: Stainless Steel



ES02-025-00-SS



ES02-050-00-SS

Product Code	ES02-025-00-SS	ES02-050-00-SS
Out-diameter (mm)	Φ 256	Φ 305
Cylinder high (mm)	595	930
Cylinder weight (kg)	6.5	17.5
Full weight (kg)	37.5	77.0
Capacity (L)	31	59.5
Filling	Coldfire Wetting Agent	Coldfire Wetting Agent
Temperature range (°C)	0~60	0~60
Working Pressure (bar)	20	20
Test Pressure (bar)	30	30
Discharge Time – Approx (s)	≥60s	≥60s
Fire Class	A,B,C,D,K	A,B,C,D,K



**Sizes: 6kg, 9kg & 12 kg**



**Material: Stainless Steel**



**ES03-06-00-SS**



**ES03-09-00-SS**



**ES03-012-00-SS**

Product Code	ES03-06-00-SS	ES03-09-00-SS	ES03-012-00-SS
Out-diameter (mm)	Φ 270	Φ 300	Φ 350
Cylinder high (mm)	190	230	250
Cylinder weight (kg)	2.4	3.6	4.2
Full weight (kg)	10.0	14.8	18.2
Capacity (L)	7.6	11.2	14
Filling	Coldfire Wetting Agent	Coldfire Wetting Agent	Coldfire Wetting Agent
Temperature range (°C)	0~60	0~60	0~60
Working Pressure (bar)	20	20	20
Test Pressure (bar)	30	30	30
Protection Area (m)	R ≥ 0.94	R ≥ 1.08	R ≥ 1.18
Discharge Time – Approx (s)	≥11s	≥14s	≥20s
Fire Class	A,B,C,D,K	A,B,C,D,K	A,B,C,D,K





**AEROSOL CAN AND BULK**



**ES04-01-00**

## AEROSOL CAN

Product Code	ES04-01-00
Out-diameter (mm)	Φ 66
Cylinder high (mm)	230
Capacity (FL OZ)	20 FL OZ
Filling	Coldfire Wetting Agent
Temperature range (°C)	0~55
Working Pressure (bar)	15
Test Pressure (bar)	25
Fire Class	A,B,C,D,K

## 5 GALLON BULK

Product Code	ES05-01-00
Dimension (L x W x H)	13*13*16 inch
Weight (lbs)	55 lbs
Capacity (gal)	5 gallon
Raw Material	Coldfire Wetting Agent
Fire Class	A,B,C,D,K



**ES05-01-00**



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**BULK**

## 55 GALLON BULK

Product Code	ES05-02-00
Dimension (Dia. x H)	Φ 23 ¼ x 34 ¼ inch
Weight (lbs)	500 lbs
Capacity (gal)	55 gallon
Raw Material	Coldfire Wetting Agent
Fire Class	A,B,C,D,K



ES05-02-00



## 275 GALLON BULK

Product Code	ES05-03-00
Dimension (L x W x H)	40*40*48 inch
Weight (lbs)	2,390 lbs
Capacity (gal)	275 gallon
Raw Material	Coldfire Wetting Agent
Fire Class	A,B,C,D,K

ES05-03-00



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ES06-01-00

## TACTICAL CAN

Product Code	ES06-01-00
Out-diameter (mm)	Φ 66
Cylinder high (mm)	220
Capacity (FL OZ)	20 FL OZ
Filling	Coldfire Wetting Agent
Temperature range (°C)	0~55
Working Pressure (bar)	15
Test Pressure (bar)	25
Fire Class	A,B,C,D,K

## 6KG TACTICAL FIRE EXTINGUISHER

Product Code	ES06-02-00
Out-diameter (mm)	Φ 164
Cylinder high (mm)	433
Cylinder weight (kg)	3.61
Full weight (kg)	10.22
Capacity (L)	9.6
Filling	Coldfire Wetting Agent
Temperature range (°C)	0~60
Working Pressure (bar)	20
Test Pressure (bar)	30
Discharge Time – Approx (s)	≥15s
Fire Class	A,B,C,D,K



ES06-02-00





# Sprinkler System with Cold Fire®



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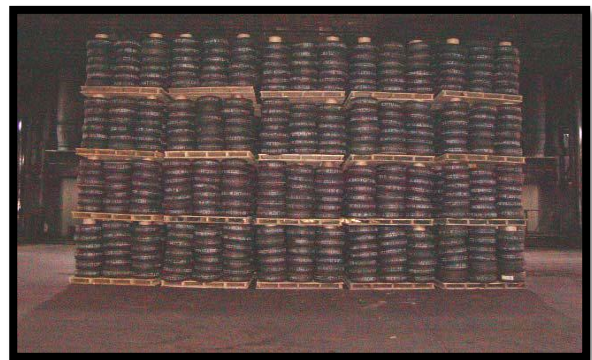


## Sprinkler System with Cold Fire®

 Test Commodity – Rubber Tires



On Tread



On Sidewall

## Standard Class II Commodity







## Sprinkler System with Cold Fire®

### Test Commodity – Rubber Tires – Test Set-Up



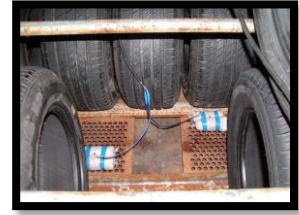
North View



South East View



East View



Fire Ignition Part

### Test Commodity – Rubber Tires – Actual Test

#### Actual Burning of Rubber Tires



#### Cold Fire® Suppressing Fire Through Sprinkler System

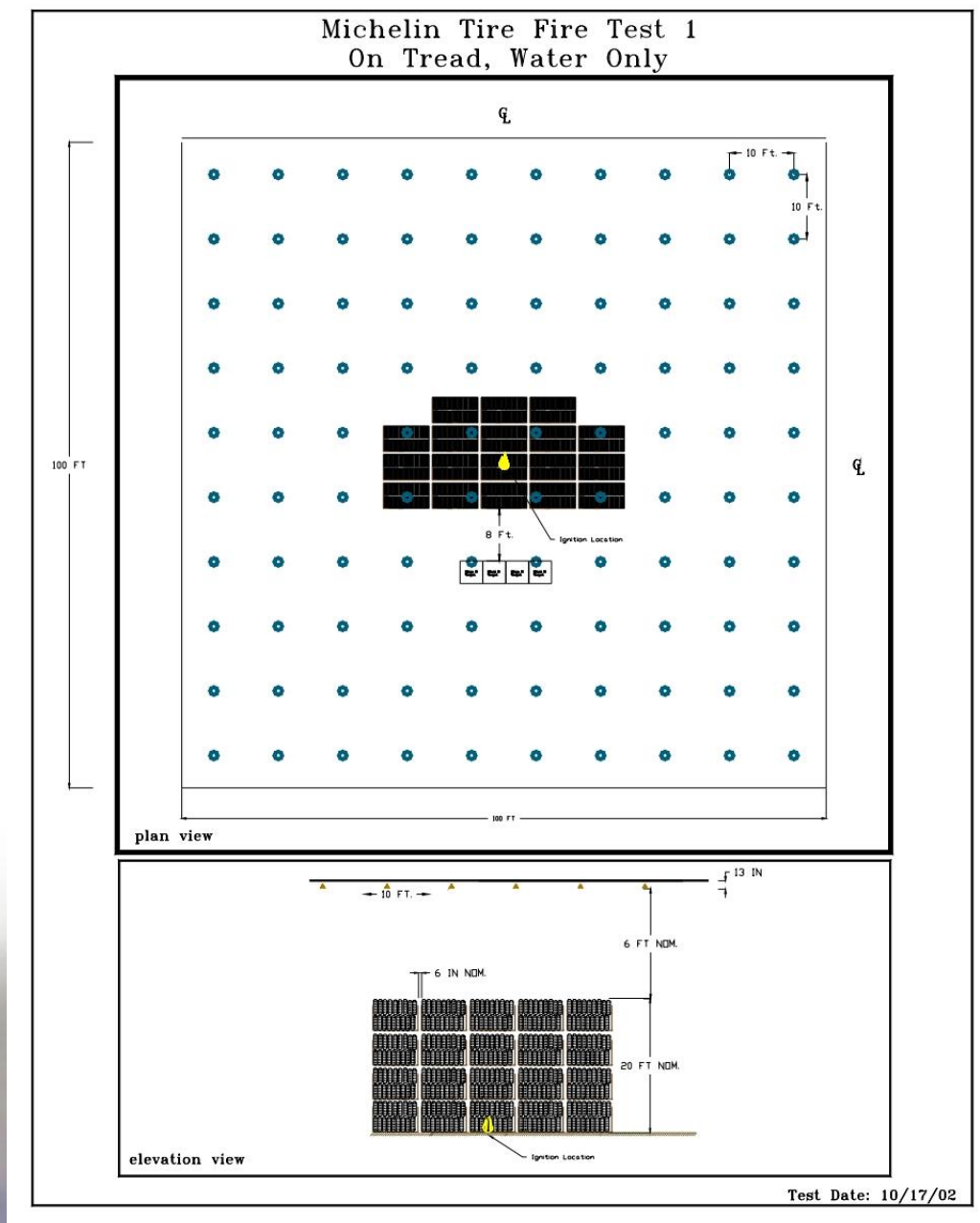






## Sprinkler System with Cold Fire®

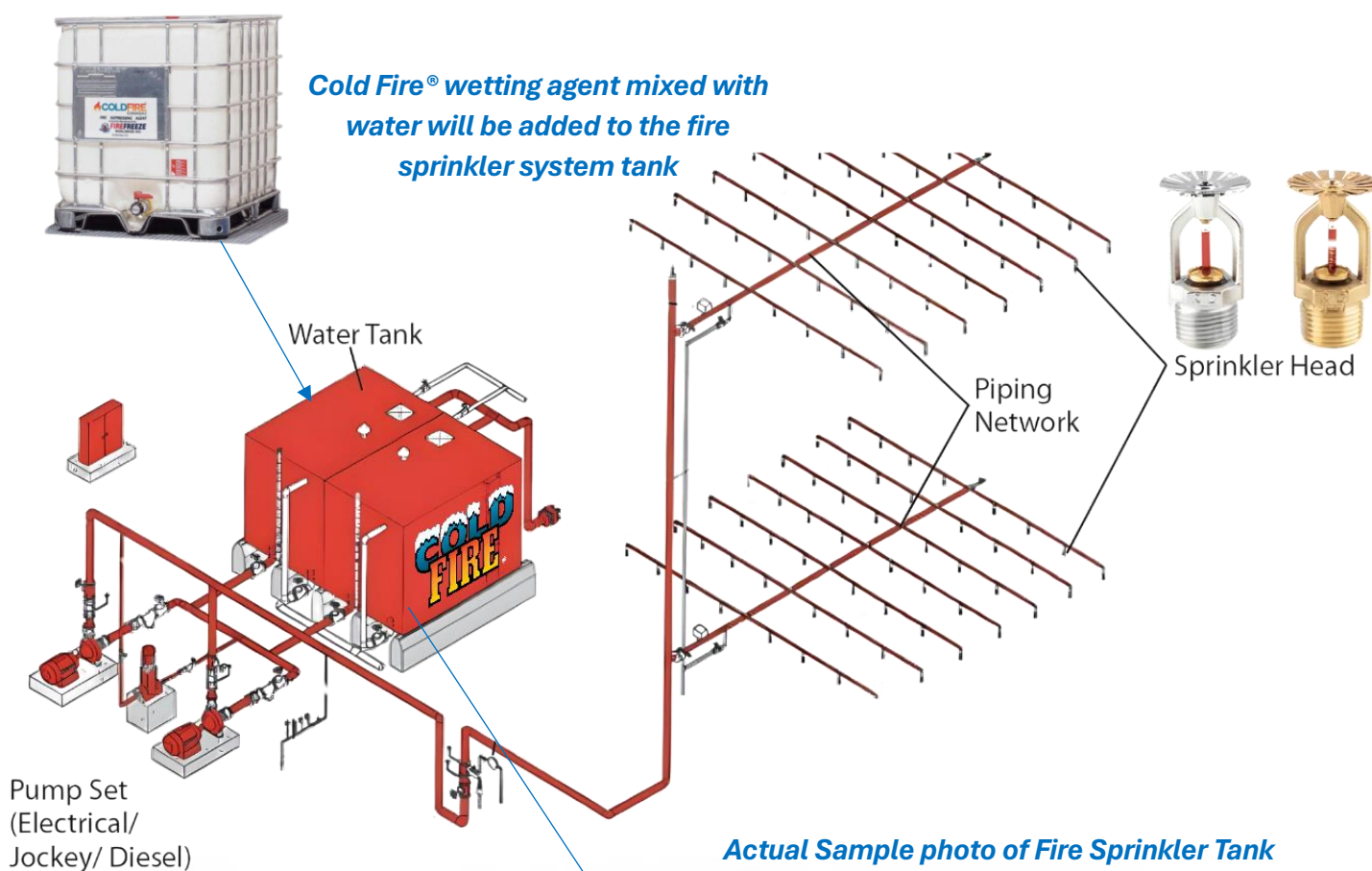
### Fire Test Sample Layout: Elevation





## Sprinkler System with Cold Fire®

 Sample Fire Sprinkler System with **Cold Fire®**



*Actual Sample photo of Fire Sprinkler Tank*



**Note: Quantity of Cold Fire® Bulks will vary based on the size of the tank**

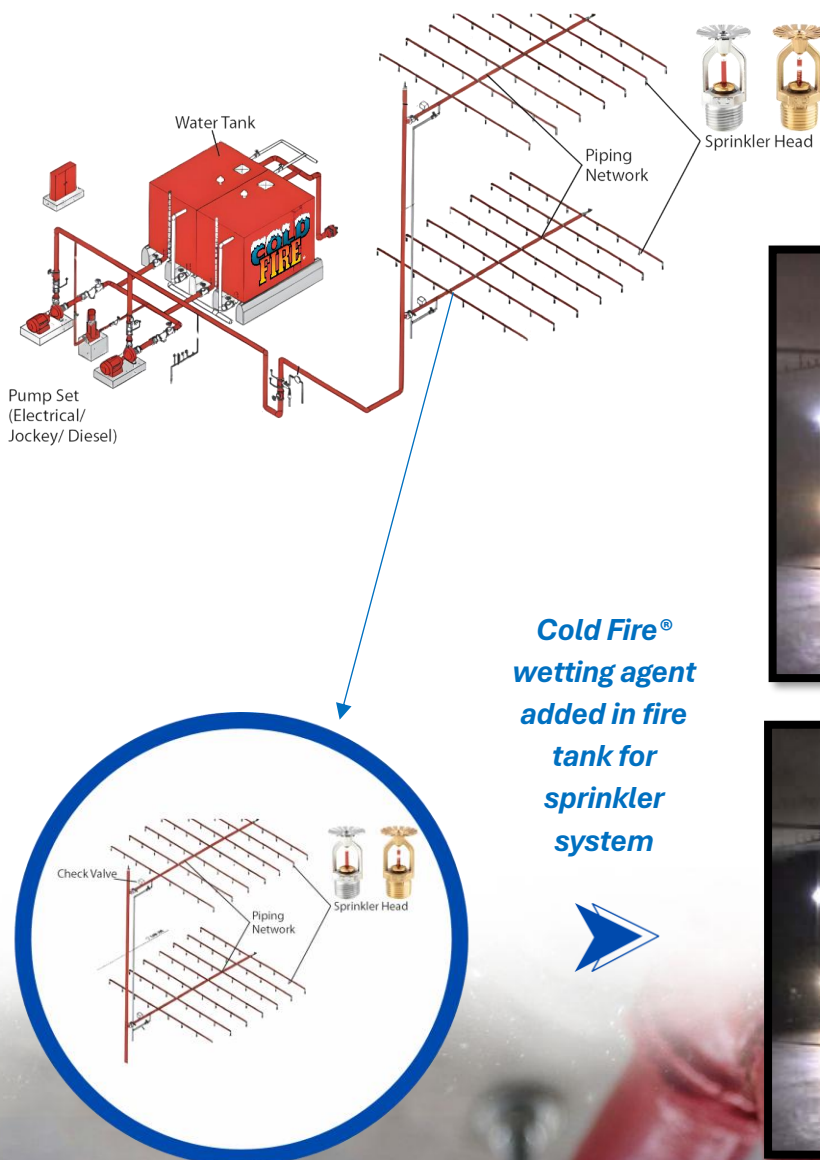






## Sprinkler System with Cold Fire®

 **Sample Fire Sprinkler System with Cold Fire®**  
*Photos are as per Cold Fire® actual sprinkler test.*



**Cold Fire®  
wetting agent  
added in fire  
tank for  
sprinkler  
system**



Learn more about the Sprinkler Test Report:  
<https://firefreeze.com/wp-content/uploads/2019/03/Sprinklers-And-Rubber-Tires-Test.pdf>







# Cold Fire® Application



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## Cold Fire® Applications

### BULK APPLICATIONS:

- 🔥 Add to pumper apparatus, reservoirs or induct into fire hose lines to attack larger fires
- 🔥 No special equipment is required
- 🔥 Available in 5, 55, 275 gallons

### PORTABLE EXTINGUISHERS:

- 🔥 Portable, quick response units available in 1-12 liters units
- 🔥 Units are re-fillable and rechargeable by the user



### CLOSED LOOP SYSTEMS:

- 🔥 Available closed loop systems, sprinkler systems, and on-board extinguishing systems, ranging in size from 55, 275 gallons
- 🔥 Applications: race cars, street rods, kit cars, motor homes, marine remote workshops, heavy equipment, logging skidders and auto haulers.
- 🔥 Units are re-fillable and rechargeable by the user







## Cold Fire® Applications

### AEROSOL CAN

Conveniently packaged in a 20 oz. application, this fire safety tool:

- 🔥 Suppresses small spot fires
- 🔥 Provides a thermal insulation barrier to help prevent heat damage and fire risk
- 🔥 Cools down hot surfaces rapidly for added safety and increased productivity
- 🔥 Applications: Trade, workshop, automotive, craft, kitchen, grilling, fireplace, camping, RV, bonfires, garage, car, boat



### Cold Fire® Tactical

- 🔥 Cold Fire® Tactical is a scalable product, providing flexibility for agencies & departments to implement based on their specific requirements
- 🔥 Cold Fire® Tactical is exclusively distributed for law enforcement agencies by Fire Suppression Consultants







## COLD FIRE® TECHNICAL CREDENTIALS

 **UL Classified**

**UL Classified: US**  
**under UL 162 and UL 711**

UL Product iQ®



GOHR.EX4660 – Wetting Agents

### Wetting Agents

**FIRE-FREEZE WORLDWIDE INC**  
272 ROUTE 46  
ROCKAWAY, NJ 07866-3826 United States

EX4660

*View model for additional information*

**Wetting Agent Concentrate**, Designation(s): Cold Fire

Last Updated on 2021-11-02

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## COLD FIRE® TECHNICAL CREDENTIALS

**C-UL Listed:**  
**Canada**  
**under ULC**  
**Subj. C175**

UL Product iQ®



GOHR7.EX4660 – Wetting Agents Certified for Canada

### Wetting Agents Certified for Canada

**FIRE-FREEZE WORLDWIDE INC**  
272 ROUTE 46  
ROCKAWAY, NJ 07866-3826 United States

EX4660

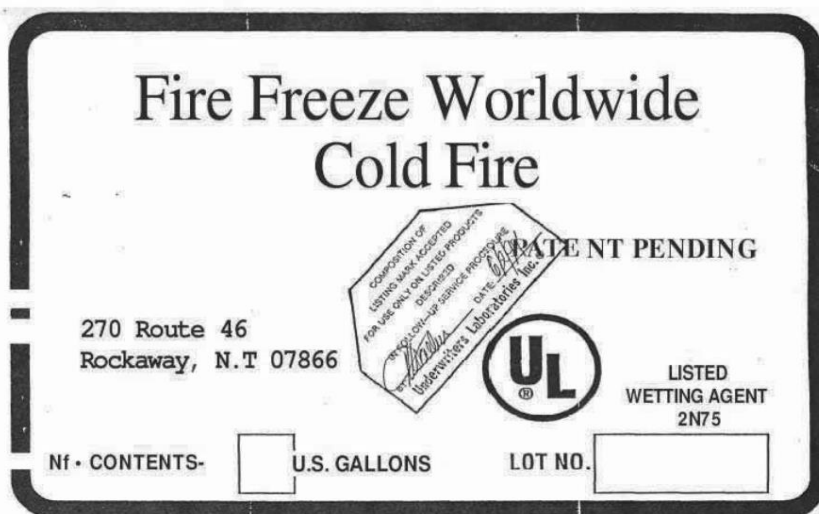
*View model for additional information*

**Wetting Agent Concentrate**, Designation(s): Cold Fire

Last Updated on 2021-11-02

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**Cold Fire® is**  
**classified by UL as**  
**2N75.**





## COLD FIRE® TECHNICAL CREDENTIALS

 **PFAS / PFOA Free**

 **Tested in accordance with NFPA 18 Standard for Wetting Agents**



Underwriters Laboratories Inc.®

Northbrook, Illinois • (847) 272-8800  
Melville, New York • (516) 271-6200  
Santa Clara, California • (408) 985-2400  
Research Triangle Park,  
North Carolina • (919) 549-1400  
Camas, Washington • (360) 817-5500

### CERTIFICATE OF COMPLIANCE

CERTIFICATE NUMBER: 10281996-EX4660  
ISSUE DATE: October 28, 1996

Issued to: **FIRE FREEZE WORLDWIDE, INC.**  
270 Route 46  
Rockaway NJ 07866

Report Reference: EX4660, June 16, 1994


This is to Certify that  
representative samples of: Model cold fire wetting agent

Have been investigated by Underwriters Laboratories Inc. in accordance with the Standard(s)  
indicated on this Certificate.

Standard(s) for Safety: NFPA18 - National Fire Protection Association Standard for Wetting Agents

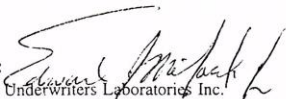
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**Only those products bearing the UL Listing Mark should be considered as being covered by  
UL's Listing and Follow-Up Service.**

The UL Listing Mark generally includes four elements as follows: the name "Underwriters Laboratories Inc." in various  
forms and type styles, or abbreviations such as "Und. Lab. Inc.", or the symbol "UL in a circle" - ; the word "Listed"; a  
control number (may be alphanumeric) assigned by UL; and the product or category name (product identifier), as indicated  
in the appropriate UL Directory.

**LOOK FOR THE UL LISTING MARK ON THE PRODUCT**

Engineer:

  
Underwriters Laboratories Inc.

Review Engineer:

  
Underwriters Laboratories Inc.

2000-44L (4/96)







## COLD FIRE® TECHNICAL CREDENTIALS

**Cold Fire® is registered by the Environment Protection Agency (EPA) on their SNAP (Significantly New Alternative Products) Program Vendor List. It has been classified by the US EPA under “Surfactant Blend A” and is approved as a substitute for Halon 1211.**

### Fire Suppressant Substitutes




Generic Name	Trade Name	Manufacturer
HCFC Blend A	NAF S-III	North American Fire Guardian
HCFC Blend B	Halotron I	American Pacific Corp.
HCFC Blend C	NAF P-III	NAFS
HCFC Blend D	Blitz III	NAFS
Powdered Aerosol A	SFE Powdered Aerosol	Allied Defense Industries
Gelled Halocarbon/ Dry Chemical Suspension	PGA Powdered Aerosol	Powsus, Inc.
Surfactant Blend A	ColdFire	Firefreeze Worldwide, Inc.
	FlameOut	Summit Environmental Corp.
IG-541	Inergen	Ansul Fire Protection
IG-55	Argonite	Ginge-Kerr Danmark A/S
IG-01	Minimax Argon	Minimax GmbH
Powdered Aerosol C	Pyrogen	AES International Pty. Ltd.
	Dynameco	International Management Services Corp.

For further information about the EPA Registration:

<https://www.epa.gov/snap/generic-substitute-names-used-snap-listings>

## COLD FIRE® INTERNATIONAL CREDENTIALS

**Cold Fire® has been certified by the Instituto Del Fuego, a private Chilean testing laboratory under Chilean Norm DS44 for Class A, B, C, D and K.**

-  SCD-20789 DS44: Cesmec Laboratory (Bureau Veritas) Certification for fire Class A, B, K under the Chilean Norm DS44 for Cold Fire® Professional Extinguishers.
-  SCD-20791 DS44: Cesmec Laboratory (Bureau Veritas) Certification for fire Class C under the Chilean Norm DS44 for Cold Fire® Professional Extinguishers.
-  SCD-20788 DS44: Cesmec Laboratory (Bureau Veritas) Certification for fire Class D under the Chilean Norm DS44 for Cold Fire® Professional Extinguishers.





## USA National Training Officers Association that used Cold Fire®



### ENVIRONMENT SAFETY & SECURITY CO.

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