



Flamblocker CF7

Cooling-Based Firefighting Agent

User Manual for Professional Firefighting Use

Version: 1.4

Date of Publication: 6-2-2026

Document Type: User Manual

Product: Flamblocker CF7

Intended Audience: Professional Firefighters and Firefighting Specialists

Flamblocker CF7 is designed exclusively for professional firefighting applications. This manual provides operational guidance, safety information, deployment methods, and handling requirements for effective and safe use under firefighting conditions.

© Flamblocker. All rights reserved.



Table of Contents

1. Purpose and Intended Audience	3
2. Product Overview	3
3. Safety Information	3
○ 3.1 Hazard Identification (SDS Reference)	3
○ 3.2 Exposure Controls and Personal Protection	4
4. Preparation for Use	4
○ 4.1 Agitation Before Use	4
5. Water Compatibility	5
6. Deployment and Mixing Methods	5
○ 6.1 Mixing Rates	5
○ 6.2 Methods of Adding Flamblocker CF7 to Water	6
7. Nozzle Compatibility and Recommendations	8
○ 7.1 Recommended Nozzle Type	8
8. Supply Containers	9
9. Required Equipment for Deployment	9
10. Firefighting Principle and Operational Use	9
○ 10.1 Conventional Firefighting Approach	9
○ 10.2 Flamblocker CF7 Cooling-Based Approach	10
○ 10.3 Operational Implications for Firefighters	10
○ 10.4 Summary of Key Differences	10
11. Post-Deployment Considerations	11
12. Storage and Handling	11
○ 12.1 Shelf Life	11
○ 12.2 Storage Conditions	11
13. Limitations of Use	11
14. Alignment With Firefighting Standards and Operational Frameworks	12
○ 14.1 Standards Alignment Statement	12
○ 14.2 Tactical Compatibility	12
○ 14.3 Equipment and Interface Consistency	12
○ 14.4 Documentation and Training Alignment	13
○ 14.5 Use Within Incident Command Systems (ICS)	13
15. Manufacturer Information	13
16. Emergency Numbers	14
Attachment 1 – Flamblocker CF7 Safety Data Sheet (SDS)	15



equipment

any pressure, any hoze, any nozzle, any dispersion ratio,
it is used from D nozzle 4-15Bar, C nozzle 6 Bar and also
as aditive in water-mist systems

Flamblocker CF7 – User Manual

Attachments. [1 Safety Data Sheet \(SDS\) Flamblocker CF7](#)

1. Purpose and Intended Audience

This user manual is intended for professional firefighters and firefighting specialists who have purchased and are authorized to deploy Flamblocker CF7. The document provides operational guidance, safety information, deployment methods, and handling requirements to ensure effective and safe use of the product under firefighting conditions.

Flamblocker CF7 is designed exclusively for professional firefighting applications and should be used only by trained personnel familiar with standard fireground operations.

2. Product Overview

Flamblocker CF7 is a firefighting agent designed to deliver prolonged and enhanced cooling when applied in combination with water. Unlike conventional extinguishing agents that rely on continuous water application, CF7 remains active on treated surfaces after water evaporation, continuing to absorb heat and significantly reducing the risk of re-ignition.

Key characteristics: - Extreme cooling-based firefighting agent - Used in combination with water as a carrier - Designed to reduce residual heat and prevent re-ignition - 100% biodegradable - Non-toxic and non-corrosive - Free of PFAS and fluorine



3. Safety Information

3.1 Hazard Identification (SDS Reference)

According to the Safety Data Sheet (SDS, Attachment 1):

Classification:

Flamblocker CF7 does not meet the criteria for classification in any hazard class under Regulation (EC) No 1272/2008 on the classification, labeling, and packaging of substances and mixtures.

A Safety Data Sheet is available upon request from distributors.

Label Elements:

No hazard symbols, signal words, or precautionary statements are applicable.

3.2 Exposure Controls and Personal Protection (SDS Section 8)

- Exposure controls: None required
- Respiratory protection: None required
- Protective gloves: None required
- Eye protection: None required
- Protective clothing or equipment: None required
- Work and hygienic practices: Practice safe workplace habits

Flamblocker CF7 does not introduce additional PPE requirements beyond standard firefighting protective equipment.

4. Preparation for Use

4.1 Agitation Before Use (advice, not mandatory)

Prior to deployment, Flamblocker CF7 advice is to stir or mix to ensure homogeneity.

This is a manufacturer advice and is not mandatory.

- For IBC containers: Stir using a suitable stick or mixing tool.
 - For 20-litre jerrycans: Tilt and invert the container several times before use.
-



5. Water Compatibility

Flamblocker CF7 is compatible with all commonly available firefighting water sources, including: - Fresh water - Groundwater - River water - Tap water - Seawater

No pre-treatment or filtration of water is required.

6. Deployment and Mixing Methods

6.1 Mixing Rates

Flamblocker CF7 is deployed by mixing it with water at a concentration between **1% and 10%**, depending on operational requirements and equipment configuration.

Type of fire/deployment	Advice mixing rate	Recommended Mixing Rate		
Forest/Wild Fire (A-Class)	3%	1-3%		
Car/Truck (combustion) (6%	1-10%		
Generator/engine room	6%	2-10%		
Data room/computer room	3%	2-10%		
Electrical installation	3%	2-10%		
EV car/Battery Storage	10-12%	6 – 100%		
Solar panels	6%	2-10%		

Scrap metal	6%	2-10%		
Car and truck tires/Rubber	6%	2-10%		
Plastics (waste and stock/fresh)	6%	2-10%		
MSW (Municipal Solid Waste) Storage/processing facility	6%	2-10%		
RDF/SRF (mixed waste materials)	6%	2-10%		
Landfill/large waste storage	3%	3-10%		
House/Apartment buildings Office buildings/Hospital etc.	3-6%	2-10%		
Fuel fires (including diesel and gasoline)	6%	6-10%		
A1JetFuel	6%	6-10%		
Other (non-specified)	6%	1-10%		

6.2 Methods of Adding Flamblocker CF7 to Water

a) Fire Truck Main Tank

- Add Flamblocker CF7 directly to the main water tank of the fire truck.
- Ensure correct mixing rate is achieved within the tank.
- No additional equipment is required beyond standard vehicle systems.

b) External Mixing Unit (Inline Proportioning)

- Install an inline foam eductor or inline foam proportioner between the main hose from the fire truck and the hose leading to the nozzle.

- Set the mixing ratio between 1% and 10% as required.

Examples.



c) Combination (C) Nozzle with External Agent Container

- Use a small-volume Flamblocker CF7 container connected directly to a combination (fog) nozzle.
- The nozzle's integrated or attached agent tank can be used for CF7 deployment.

Example.



7. Nozzle Compatibility and Recommendations

7.1 Recommended Nozzle Type

The most advised nozzle type for deploying Flamblocker CF7 is a **Combination (Fog) Nozzle**.

Key features: - Adjustable spray patterns: straight stream, narrow fog, wide fog - Suitable for cooling, hydraulic ventilation, and exposure protection - Commonly used on 1¾-inch attack lines - Available in: - Constant gallonage versions - Automatic pressure-regulating versions

Combination fog nozzles equipped with an additional external agent tank can be used to deploy Flamblocker CF7 without separate proportioning equipment.

Flamblocker CF7 can be used at any pressure, any hose, any nozzle, any dispersion ratio, it is used from D nozzle 4-15Bar, C nozzle 6 Bar and also as additive in water-mist systems



8. Supply Containers

Flamblocker CF7 is supplied in the following standard container formats: - 20-litre jerrycan
- 1000-litre IBC (Intermediate Bulk Container)



9. Required Equipment for Deployment

- **Deployment from fire truck main tank:**
No additional equipment required.
 - **Deployment using 20-litre jerrycan or 1000-litre IBC via hose line:**
1 pump unit for extracting CF7 and transport to inline mixing unit, 1x Inline mixing unit required (inline foam eductor or inline foam proportioner) installed between the C-hose from the truck and the C-hose to the nozzle.
 - **Alternative deployment option:**
Combination fog nozzle with integrated or external agent tank.
-



10. Firefighting Principle and Operational Use

10.1 Conventional Firefighting Approach

Traditional firefighting relies on the sustained application of large volumes of water to absorb heat, reduce flame temperature, and prevent re-ignition. Once the water

evaporates or runs off, the cooling effect stops, often requiring repeated or continuous application.

10.2 Flamblocker CF7 Cooling-Based Approach

Flamblocker CF7 operates on a different principle focused on prolonged heat removal.

- Water acts as a carrier to distribute CF7 evenly and provide immediate cooling.
- After water evaporation, CF7 remains on treated surfaces.
- CF7 continues absorbing heat, lowering surface and material temperatures.
- This disrupts the heat feedback loop and reduces re-ignition risk.

10.3 Operational Implications for Firefighters

- A single, controlled application is typically sufficient.
- Continuous or repeated water application is generally unnecessary when deployed correctly.
- CF7 cools both visible flames and underlying hot surfaces.
- Emphasis should be placed on accurate placement and sufficient initial application and correct mixing rate rather than volume-based suppression.

10.4 Summary of Key Differences

Conventional Agents	Flamblocker CF7
Relies on large water volumes	Relies on sustained cooling effect
Cooling stops after evaporation	Cooling continues after water is gone
Requires repeated application	Typically requires one effective application
Suppression-focused	Heat removal and re-ignition prevention focused

This approach enables faster thermal control, reduced water consumption, improved efficiency, and enhanced post-extinguishment safety.

11. Post-Deployment Considerations

Conventional firefighting agents often require extensive post-incident cleaning due to chemical residues and contamination risks.

Flamblocker CF7 is: - 100% biodegradable - Eco-friendly - Non-toxic - Non-corrosive - Free of PFAS and fluorine

After deployment, the affected area does **not** require cleaning related to CF7 application. The site is not contaminated and poses no risk to: - Human health - Animal health - The environment - Flora and fauna

12. Storage and Handling

12.1 Shelf Life

Flamblocker CF7 has **no shelf life limitation** and no expiration date when stored under proper conditions.

12.2 Storage Conditions

- Store in a sheltered environment
- Do not store in direct or open sunlight
- Storage temperature range: **-30°C to +60°C**

Exceeding these temperature limits or prolonged exposure to direct sunlight may reduce product efficiency and lead to loss of operational capability.

13. Limitations of Use

- Flamblocker CF7 must always be used with water as a carrier.
- Deployment must be performed by trained firefighting personnel.
- Storage conditions must be respected to maintain performance.

14. Alignment With Firefighting Standards and Operational Frameworks

14.1 Standards Alignment Statement

Flamblocker CF7 is designed and documented for use within established professional firefighting operational frameworks. The product's deployment concepts, equipment interfaces, and tactical use are intended to be compatible with commonly recognized international firefighting standards and doctrines.

This user manual is structured to align in terminology and operational logic with, but does not claim certification to, the following representative frameworks:

- **NFPA (National Fire Protection Association)** operational firefighting practices and hose/nozzle configurations
- **EN (European Norms)** related to firefighting equipment, hose couplings, and extinguishing agent deployment
- **ISO standards** governing emergency response equipment handling, safety documentation, and product use instructions

No explicit compliance, approval, or certification is implied unless separately documented by the manufacturer or an authorized body.

14.2 Tactical Compatibility

Flamblocker CF7 is intended to integrate into standard firefighting tactics, including but not limited to: - Offensive and defensive structural firefighting - Exposure protection and boundary cooling - Post-knockdown cooling and re-ignition prevention - Industrial and wildland–urban interface (WUI) operations where water-based suppression is employed

The agent is deployed using standard fire service equipment (fire apparatus tanks, C-hoses, combination nozzles, inline proportioners) consistent with NFPA and EN operational norms.

14.3 Equipment and Interface Consistency

- Hose diameters, nozzle types, and proportioning concepts referenced in this manual reflect commonly accepted NFPA and EN firefighting configurations.



- Combination (fog) nozzles referenced are consistent with international firefighting practice for cooling, ventilation, and exposure protection.
- Inline eductors and proportioners described align with standard foam proportioning principles recognized across NFPA and EN systems.

14.4 Documentation and Training Alignment

This manual is intended to: - Support inclusion of Flamblocker CF7 in departmental standard operating procedures (SOPs) - Be used as a reference document for firefighter training and familiarization - Complement, not replace, existing firefighting doctrine, incident command systems, or safety protocols

Operational decisions remain the responsibility of the incident commander and trained firefighting personnel in accordance with local regulations and operational guidelines.

14.5 Use Within Incident Command Systems (ICS)

Flamblocker CF7 is designed to be deployed within structured incident management frameworks such as ICS. Key points for operational integration include: - **Resource Assignment:** CF7 deployment teams can be designated as part of attack or suppression units, with clear task assignments for mixing, nozzle operation, and coverage control. - **Task Organization:** Inline proportioners and combination nozzles can be assigned per sector to optimize agent application and coverage efficiency. - **Incident Action Planning:** Use of CF7 should be included in pre-incident and active incident plans, particularly for high-heat, high-reignition-risk areas. - **Communication and Coordination:** Deployment teams should maintain standard ICS communications for placement, concentration, and operational updates. - **Post-Incident Reporting:** CF7 usage, including mixing ratios and deployment points, should be logged in ICS reports for post-incident evaluation and record keeping.

Integrating CF7 into ICS ensures controlled, safe, and effective firefighting operations that complement existing command structures and procedures.



15. Manufacturer Information

Product Name: Flamblocker CF7

Manufacturer / Brand: Flamblocker

Website: www.flamblocker.com

To order Flamblocker CF7, please contact Flamblocker via info@flamblocker.com or check the Flamblocker website for your nearest distributor or dealer.

Additional technical documentation and Safety Data Sheets are available upon request from authorized distributors and via info@flamblocker.com.

16. Emergency numbers

Emergency contact: +31-6-288-47-131 / +386-31-670-715

In case of suspected health risk or issue, always contact your local hospital and provide Flamblocker CF7 Safety Data Sheet (SDS) to medical staff. Safety Data Sheet is attached to this document as attachment 1 and is also available upon request.



Attachment 1. Flamblocker CF7 Safety Data Sheet (SDS)

SAFETY DATA SHEET

Compliant with: Regulation (EC) Nr. 1907/2006 (REACH), Regulation (EC) Nr. 1272/2008 (EU-GHS, CLP)

CF7 – all-purpose wetting agent

Revised: February 6th, 2026.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name:

Flamblocker CF7 – All-purpose wetting agent

Product description:

Colourless liquid

Other means of identification:

HS Code: 38130000

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses:

Non-hazardous fire extinguishing agent.

Used to hinder temperature increase, prevent ignition and re-ignition of fire, reduce smoke development, and improve dispersion of extinguishing media.

Suitable for application on fire classes **A, B, F, and D**, Li-ion Batteries and for use as a fat and grease cleaner.

Dilution with water (typical use concentrations):

- Fire class A: 1–3 %
- Fire class B: 3–6 %
- Fire class F / D: up to 12 %

Uses advised against:

Use outside the recommended dilution ranges or for applications not consistent with the specified fire classes.

1.3 Details of the supplier of the safety data sheet

Supplier / Responsible party (global distribution):

Flamblocker BV

Brandpunt 32

1705 SK Heerhugowaard

The Netherlands

Telephone (responsible person):

+31 6 288 47 131 (Mr. Martijn Beerthuisen)

Email (competent person responsible for the SDS):

info@flamblocker.com

**Website:**

www.flamblocker.com

Manufacturer:

C-Fire NV
Frank Van Dyckelaan 3
9140 Temse
Belgium

Telephone:

+32 3 710 69 01

Email:

info@c-fire.eu

Website:

www.c-fire.eu

1.4 Emergency telephone number**Emergency telephone number (chemical emergency advice):**

+31 6 288 47 131 (Mr. Martijn Beerhuizen, Flamblocker BV)

Availability:

24 hours / 7 days

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures. However, a safety data sheet is being supplied for it upon request of distributors.

2.2 Label elements

No hazards or precautionary statements applicable.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

Water-based solution of plant extracts and alkali-salts of inorganic acids;

No dangerous substances, no foams, no aff.

No PBT, PFAS, PFOS and PFOA. No vPvB substances. Fluorine free.

SECTION 4: FIRST AID MEASURES

Inhalation: no harm

Skin contact: wash affected area with soap and water

Eyes: remove contact lenses. Flush eyes with clear running water while holding eye lids open.

Ingestion: non-toxic, if swallowed (by large quantities) do not induce vomiting, seek medical advice immediately.

SECTION 5: FIRE FIGHTING MEASURES SECTION

General hazards: no danger of fire, product itself is fire extinguishing agent.



SECTION 6: ACCIDENTAL RELEASE MEASURES

Action to be taken in case of, material is being released or spilled: flush area with water.

SECTION 7: HANDLING AND STORAGE

Precautions to be taken in handling and storage: protect from extreme temperatures to keep strength of solution

Shelf life: not limited.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure control: none required

Personal protection: practice safe workplace habits

Respiratory protection (specify type): none required

Protective gloves: none required

Eye protection: none required

Other protective clothing or equipment: none required

Work / hygienic practices: practice safe workplace habits.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid,

Odor: Slightly fresh smell

pH (20°C): 7,5 - 7,8

Melting point : similar to water, not determined

Freezing point: -30°C

Initial boiling point and boiling range: similar to water, not determined

Relative density: 1,02

Solubility in water: 100% , water solution

Kinetic Viscosity (20°C) : 72,42 mm²/s

Refractive Index (20°C) : 1.37582 (nD)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: no known reactions

10.2 Chemical stability: Under storage at normal ambient temperatures (to keep strength of solution), the product is stable.

10.3 Possibility of hazardous reactions: No hazardous reaction when handled and stored according to provisions

10.4 Conditions to avoid: extreme temperatures (to keep strength of solution)

10.5 Incompatible materials: not known

10.6 Hazardous decomposition products: no known hazardous decomposition products

SECTION 11: TOXICOLOGICAL INFORMATION

Not known any toxicological (health) effects

No PBT, PFAS, PFOS and PFOA. No vPvB substances. Fluorine free.



SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Testing of acute toxicity on green algae (*Raphidocelis subcapitata*):

ErC₅₀, 72 h, 57 mg L⁻¹, not acute toxic to that aquatic organisms

Testing of acute toxicity on *Daphnia magna* Straus (Cladocera, Crustacea):

EC₅₀, 48 sati, > 1000 mg L⁻¹, not acute toxic to that aquatic organisms

Testing of inhibition of grow of active-mud-microorganisms:

EC₅₀ > 1000 mg L⁻¹, not acute toxic to that organisms

No PBT, PFAS, PFOS and PFOA. No vPvB substances. Fluorine free.

12.2 Persistence and degradability

Abiotic Degradation: Not determined

Physical- and photo-chemical elimination: Not determined

Biodegradability (21 days): 100,0 %; testing method according to EN ISO 9439:2000 (*Daphnia magna*)

12.3 Bioaccumulative potential

Not determined

12.4 Mobility in soil

Not determined

12.5 Results of PBT and vPvB assessment

CF 7 - all purpose wetting agent is rapid 100% biodegradable mixture with no PBT

(Persistence, Bioaccumulation, Toxicity) and no vPvB substances.

100% biodegradable.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Not considered as a hazardous waste. Dispose after diluting with water.

No PBT, PFAS, PFOS and PFOA. No vPvB substances.

SECTION 14: TRANSPORT INFORMATION

CF 7 – all-purpose wetting agent is not labeled as hazardous material. (100% biodegradable)

No restriction for transportation of product.

Customs Commodity Code (HS code): 38130000

EAN Code: 5407008000288

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or

Mixture Not known any specific regulation, 100% biodegradable

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.



SECTION 16: OTHER INFORMATION

Disclaimer:

This SDS is to the best of our knowledge and belief, accurate and reliable as of the date compiled. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Certificate Number: 05084 60/20 17025HAA - 1040