FFG

USER MANUAL

REV 01 2026

PRODUCT OVERVIEW

PRODUCT NAME:	Fireblock FFG (Fire Fighting Gel)
FORM:	Gel (non-toxic, biodegradable)
PACKAGING:	9L, 25l and 50l extinguishers, AFTS (Advance fire fighting backpacks), 1000l flow bins
COLOUR:	Yellow
USE CASE:	Fire Suppression for Class A Fires , specifically formulated for the professional firefighting industry as an all-round improvement on DCP and Water products.
WARNING:	Not suitable for electrical fires (Class C), unless correct firefighting equipment is used, chemical fires, or flammable liquids (Class B).

DESCRIPTION

FIREBLOCK FFG is an advanced, non-toxic, and biodegradable fire suppression gel engineered to deliver superior firefighting performance across a wide range of applications. Its thick, adhesive formulation clings to both vertical and horizontal surfaces, including wood, metal, rubber, plastics, and textiles, forming a protective barrier that cools, smothers, and isolates heat sources.

By combining rapid temperature reduction, oxygen exclusion, and heat encapsulation, FIREBLOCK FFG achieves faster knockdown and enhanced prevention of re-ignition compared to conventional firefighting agents such as water and Dry Chemical Powder (DCP). Its superior cooling capacity allows effective control of deep-seated and smouldering fires, making it ideal for high-risk scenarios such as:

- Tyre and vehicle fires
- Recycling and waste stockpiles
- Industrial hazards and machinery fires
- Structural and commercial fire incidents

Unlike DCP, FIREBLOCK FFG is non-corrosive and environmentally responsible, making it safe for use around equipment, electronics, vehicles, and infrastructure. The gel is premixed with deionized water at the factory, ensuring consistent performance, reliability, and a shelf life of up to five years.

FIREBLOCK FFG is versatile and suitable for multiple deployment methods, including:

- Portable extinguishers (9 L, 25 L, 50 L)
- Mobile response units
- Pump-and-tank systems
- Fixed sprinkler installations
- Drone and aerial spraying for fire prevention or suppression

The product is 10× more effective than water, providing long-lasting protection and residual cooling even in challenging fire scenarios. Its gel formulation clings to hot and vertical surfaces, preventing drip-off and ensuring continuous fire suppression.

With FIREBLOCK FFG, emergency services, industrial operators, and commercial facilities gain a safe, environmentally friendly, and highly effective fire protection solution capable of handling both active fires and preventive applications, delivering peace of mind and superior fire safety wherever it is deployed.

APPLICATIONS

FIREBLOCK FFG IS DESIGNED FOR:

01 Fire departments and emergency response services

02 Residential, commercial, and industrial property protection

03 Vehicle and transport fires, including cars, trucks, buses, and heavy equipment

04 Industrial fire safety and high-risk operational environments

05 Fixed fire suppression and sprinkler system installations as an enhanced alternative to water

06 Mobile firefighting units, pump-and-tank systems, and rapid response vehicles

07 Recycling and waste management facilities for deep-seated and smouldering fires

08 Stockpiles, storage yards, and bulk material hazards prone to heat retention and re-ignition

09 Remote or water-scarce areas where reduced water consumption is critical preventative asset protection

KEY FEATURES

FEATURE	DESCRIPTION
Easy Storage & Handling	Packaged for convenient transport, storage, and deployment.
Extended Residual Action	Forms a cooling and insulating layer that continues to suppress heat by providing a protective barrier.
Fast-Acting Suppression	Quickly extinguishes flames on contact, minimizing fire spread.
High Heat Resistance	Maintains integrity under extreme temperatures to prevent re-ignition.
High Viscosity Gel Formulation	Ensures strong adhesion to vertical and uneven surfaces, preventing runoff and enhancing fire protection.
Multi-Deployment Capability	Suitable for pumps, hoses, drones, fixed systems, and manual application methods.
Non-Toxic & Biodegradable	Safe for humans, animals, aquatic life (LC50) soil and water
Rapid Flame Suppression	Extinguishes Class A and C fires (depending on firefighting equipment used) within seconds, reducing thermal exposure and flame spread.
Safe for Personnel	Safe for first responders and occupants.
Storage & Shelf Life	Stable under ambient conditions for up to 5 years
Thermal Stability	Maintains performance at temperatures up to 1,100 °C, providing resistance against re-ignition.

CORE BENEFITS

1. Reduces firefighter exposure and improves operational safety.
2. Prevents re-ignition by cooling and isolating fuel surfaces.
3. Provides instant fire knockdown with superior heat absorption.
4. Cuts water or DCP use while boosting suppression efficiency.
5. Non-corrosive and safe for all equipment and personnel.
6. Biodegradable, non-toxic, and environmentally sustainable.
7. Performs reliably in wind and extreme heat conditions.
8. Up to 10× more effective than water—saves water, time, and labour.
9. Compatible with standard extinguisher testing and servicing.
10. Delivers strong cooling effect on tyres and other high-heat materials.

FIRE CLASS COMPATIBILITY TABLE

FIRE CLASS	DESCRIPTION	FIREBLOCK FFG COMPATIBILITY
A	Wood, paper, cloth, etc.	Highly effective
B	Flammable liquids (diesel, petrol)	Not suitable
C	Gaseous fires	Not suitable
D	Metal fires	Not suitable
E	Electrical fires	Effective (depending on fire fighting equipment used)
F	Cooking oils and fats	Not suitable

FIREBLOCK FFG VS WATER VS DCP

FACTOR	FIREBLOCK FFG	WATER ONLY	DCP
Fire Suppression	Retards combustion, excellent cooling effect	Temporary cooling, rapid re-ignition	Temporary Cooling effect, easy to re-ignite.
Environmental Safety	Non-toxic, biodegradable	Safe but less effective	High impact
Coverage	Greater area per volume	Requires more water	Requires more extinguishers
Cost Efficiency	Reduces re-application and water usage	High consumption, less efficient	Expensive, corrosive and requires large quantities
Residue	Low gel residue, easy to clean	None	High Powder residue
Use on Electrical Fires	Depends on fire fighting equipment used	No	Yes
Visibility During Use	Yellow	Clear	High (White powder)

FIREBLOCK FFG USES

Risk / Scenario	FFG Advantage	DCP (Dry Chemical Powder) Comparison
Brake & Tyre Fires	Instantly cools overheated parts to stop ignition; prevents re-ignition	Powder may extinguish flames but does not cool surfaces; risk of reignition remains
Vertical / Hard-to-Reach Surfaces	Gel clings and stays in place even under heat, vibration, or gravity	Powder falls off quickly; limited effect on vertical surfaces
Multiple DCPs Usually Required	One FFG extinguisher can replace several DCP units	Often multiple DCPs needed to achieve the same effect
Fire Prevention (not just suppression)	Spray on hot components before visible flames to prevent ignition	Not possible; DCP only acts on active fires
Frequent Use on Vehicles	Non-corrosive, safe for regular application on metals, rubber, wiring	Powder may corrode metals and damage wiring
Sprinkler System Activation	FFG can complement or replace water in high-risk areas; adheres to surfaces to provide residual protection	DCP cannot integrate into sprinkler systems; powder disperses rapidly, no residual protection
Recycling / Waste Plants	Gel suppresses fires in combustible waste, plastics, and shredded materials; reduces dust and smoke	Powder may suppress flames but does not prevent re-ignition; high dust levels increase visibility hazards
Application	Use like any other extinguisher; keep an additional 9 L FFG extinguisher for rapid response	Standard DCP procedure
Residue & Cleanup	Leaves minimal gel residue; rinses off easily with water	Leaves corrosive powder; requires deep cleaning

Risk / Scenario	FFG Advantage	DCP (Dry Chemical Powder) Comparison
Damage to Electronics	Non-corrosive; safe on electronics, wiring, and equipment	High risk – powder infiltrates and damages electronics
Health Risks	Non-toxic, biodegradable; safe in enclosed spaces	Irritates eyes, skin, lungs; unsafe in enclosed spaces
Visibility During Discharge	Yellow gel; maintains visibility for safe evacuation	Powder cloud reduces visibility; hazardous in evacuation
Cooling Effect	High – instantly cools hot surfaces and prevents reignition	None – surfaces remain hot
Risk of Reignition	Low – gel clings and cools hotspots	High – DCP does not reduce surface heat
Ease of Cleanup	Quick wash-down with water; use de-ionized water for electronics	Time-consuming; powder settles in vents, keyboards, files
Suitable for Office Use	Excellent – designed for sensitive environments	Poor choice – damages infrastructure and electronics
Environmental & Staff Safety	Biodegradable and safe for humans, animals, and environment	Residue can be harmful to humans and environment
Industrial & Vehicle Use	Effective for vehicle engine bays, battery compartments, brake systems, machinery, sprinklers, and recycling plants	Limited to fire suppression; no cooling, risk of corrosion

STORAGE AND HANDLING

01 Store in original, sealed containers in a cool, dry place, out of direct sunlight.

02 Keep away from incompatible materials, including strong acids or bases.

03 Ensure proper ventilation in storage areas

04 Do not dilute FIREBLOCK FFG; use in the premixed formulation supplied by the factory to maintain performance.

INSTRUCTIONS FOR USE

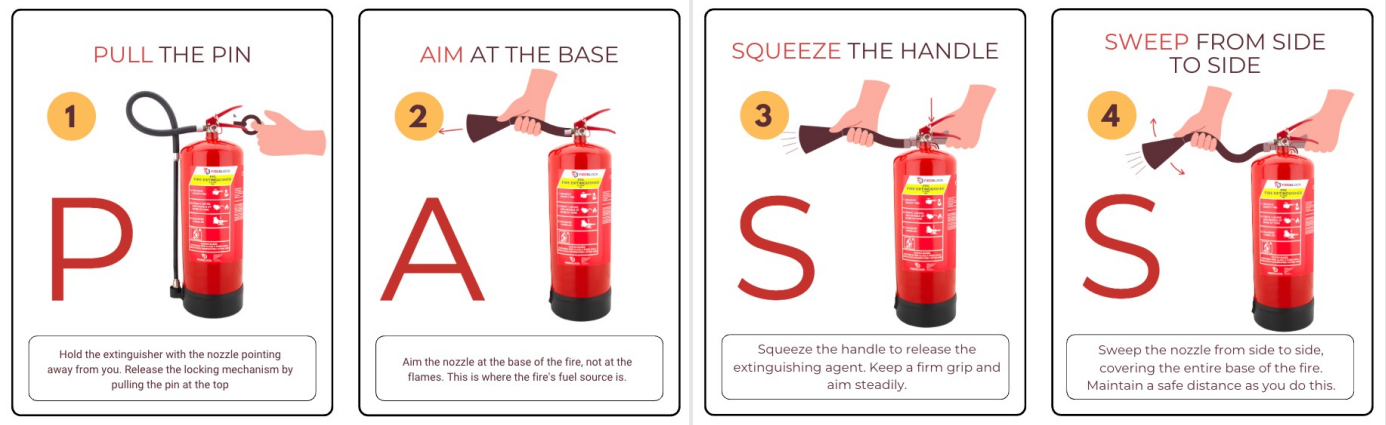
1. USE OF FIREBLOCK FFG PORTABLE EXTINGUISHER

Fireblock FFG extinguishers are operated in the same manner as conventional water or foam fire extinguishers. No special technique or additional training is required beyond standard extinguisher use procedures.

Always follow the instructions printed on the extinguisher label and your site fire safety protocols.

STANDARD OPERATING STEPS (PASS METHOD)

P — Pull the safety pin
A — Aim the nozzle at the base of the fire
S — Squeeze the handle to discharge
S — Sweep side to side across the base of the flames



PROCEDURE

1. Approach the fire from upwind where possible
2. Maintain a safe exit route at all times
3. Aim at the base (fuel source), not the flames
4. Apply FFG in controlled sweeping motions
5. Continue application until the fire is fully extinguished and cooled
6. Monitor for re-ignition

INSTRUCTIONS FOR USE

2. USE OF FIREBLOCK FFG THROUGH PUMP SYSTEMS

When applied through pumps, hose reels, fire units, or vehicle-mounted systems, Fireblock FFG is used the same way as standard water-based firefighting operations.

The primary difference is improved cooling, encapsulation, and knockdown performance.

KEY PRINCIPLE

Attack the source of the fire, not the flames.

FFG must be directed onto the burning material to:

- Cool the fuel
- Penetrate surfaces
- Suppress vapours
- Prevent re-ignition

PUMP APPLICATION STEPS

1. Charge hose line as normal
2. Select spray or jet pattern appropriate to the fire
3. Advance safely toward the fire
4. Apply directly to the base and seat of the fire
5. Work methodically from front to back
6. Continue application until complete cooling is achieved
7. Overhaul and check for hotspots

Apply directly here ↑

NOT into flames ↑

INSTRUCTIONS FOR USE

3. APPLICATION GUIDANCE

DO

- ✓ Aim at the base of the fire
- ✓ Use steady, controlled application
- ✓ Ensure full coverage of burning material
- ✓ Continue cooling after flame knockdown

DO NOT

- ✗ Spray only at flames
- ✗ Use short bursts that do not reach the fuel
- ✗ Stop immediately after flames disappear
- ✗ Dilute FFG unless specifically instructed

4. OPERATIONAL NOTES

- Compatible with standard firefighting equipment
- No special pumps or nozzles required
- Effective on Class A and applicable mixed-risk fires
- Reduced water usage compared to water-only attack
- Faster knockdown and improved cooling performance

MAINTENANCE AND SERVICING

Keeping Your Fireblock FFG Extinguisher Ready for Use

Regular inspection and servicing are essential to ensure reliable performance during an emergency. A poorly maintained extinguisher may fail when needed.

MONTHLY USER CHECK

Inspect visually once per month:

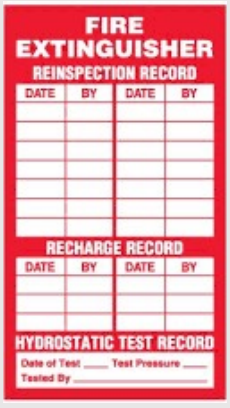
- No dents, cracks, corrosion, or leaks
- Hose and nozzle clear and secure
- Safety pin and tamper seal intact
- Labels legible and unit accessible
- Pressure gauge in green (operational) zone

IF ANY DEFECT IS FOUND, REMOVE FROM SERVICE IMMEDIATELY.

AFTER EVERY USE

- Recharge or refill immediately
- Re-pressurise to operating pressure
- Inspect before returning to service

Never store or reuse a partially discharged extinguisher.



ANNUAL SERVICE (CERTIFIED TECHNICIAN)

- Full inspection and functional test
- Pressure and valve checks
- • Recharge if required

Service must be recorded on the unit or in maintenance logs.

FIVE-YEAR MAJOR SERVICE (MANDATORY)

Every **5 years**, regardless of use:

- Fully discharge
- Internal inspection
- Refill with fresh Fireblock FFG agent
- Re-pressurise and recertify

SAFETY INFORMATION

FIREBLOCK FFG is designed to be non-toxic, biodegradable, and safe for use in a wide range of environments, including offices, industrial plants, vehicles, and commercial facilities. However, safe handling practices should always be followed to ensure optimal performance and user safety.

PERSONAL SAFETY

- Avoid direct contact with eyes and prolonged skin exposure. In case of contact, rinse immediately with water.
- Use personal protective equipment (PPE) such as gloves and safety glasses during handling and application.
- Inhalation: FIREBLOCK FFG is non-aerosol and low in airborne particles, but avoid breathing mist during high-volume spraying.

ENVIRONMENTAL SAFETY

- Fully biodegradable and environmentally friendly; safe for humans, animals, and most ecosystems.
- Avoid accidental release into large open water systems; although low risk, standard spill containment is recommended.
- Do not mix with incompatible chemicals, solvents, detergents, or other agents.

FIRST AID MEASURES

- Skin contact: Wash affected area with water.
- Eye contact: Flush with copious amounts of water for at least 15 minutes. Seek medical attention if irritation persists.
- Ingestion: Rinse mouth and seek medical advice. Do not induce vomiting unless instructed by medical personnel.
- Inhalation: Move to fresh air; seek medical attention if breathing difficulties occur.

OPERATIONAL PRECAUTIONS

- Use in accordance with product instructions, deployment systems, and safety protocols.
- Ensure that all personnel are trained in fire suppression procedures and familiar with the product’s characteristics.
- Keep away from children and unauthorized personnel.

Material Safety and Data Sheet

Contact FIREBLOCK ® for SDS Safety Data information sheet or click here.

Warranty Information

Fireblock FFG comes with a 1 year warranty against manufacturing defects. This warranty does not cover misuse, improper storage or accidental damage.
For assistance or claims, contact our customer support team at Fireblock (Pty) Ltd: support@fireblock.co.za

Emergency Contact Information

In case of a fire emergency beyond the capacity of this product, immediately evacuate and contact your local fire department.

Liability Disclaimer

Use of Fireblock FFG constitutes acceptance of the following:
Fireblock (Pty) Ltd disclaims liability for indirect damages, operational losses, or environmental penalties arising from improper use. Users must confirm suitability and regulatory compliance for their specific application.
Always follow manufacturer guidelines and local legislation. The manual serves as a guidance based on field tested application procedures. Site conditions may require adaption of the outlined practices. Users must ensure compliance with local safety regulations, environmental legislation and site-specific risk assessments..

.

FURTHER INFORMATION & SUPPORT

For copies of technical data sheets, videos or certificates visit our website : www.fireblock.co.za

FIREBLOCK (Pty) Ltd

Address:	352 Larsen Road, Muldersdrift, South Africa, 1746
Tel:	+27 (11) 957 5010
Website:	www.fireblock.co.za
Email:	support@fireblock.co.za
Product Code:	Fireblock FFG