

WFP – WildFirePro / FER 1000

Product Data Sheet

Next Generation Wildfire Suppression and Retardant Fluid

WildFirePro (FER 1000) is a next generation wildfire suppression and retardant fluid engineered to knock down flames rapidly, prevent re-ignition, and provide extended protection for up to two weeks after application. Its performance is driven by a combination of rapid heat absorption and chemical interruption of the combustion process.

When applied to burning vegetation, WildFirePro quickly reduces flame height, extracts heat, and prevents lateral fire spread. The formulation prolongs water evaporation and leaves an invisible, non flammable coating on treated fuels, maintaining effectiveness even after drying. This enables reliable performance in challenging wildfire conditions including high ambient temperatures, strong winds, and sloping terrain.

For maximum effectiveness, WildFirePro should be used undiluted, particularly where burn loads are high or where pre-treatment is intended to provide extended protection. Internal testing demonstrates effectiveness at dilution levels down to 10% where operationally required.

WildFirePro is suitable for direct attack, indirect attack, pre-treatment of vegetation, reinforcement of control lines, and Wildland–urban interface (WUI) protection. By reducing fire intensity at strategic points, it expands tactical options for incident commanders and supports earlier containment.

A fully biodegradable red colourant is available to aid temporary visibility and managed application.



Technical Specification

Property	Value
Appearance	Clear or Red
Fire Class	A (34A)
Specific Gravity (20°C)	1.150 - 1.157
pH (20°C)	6.5 - 7.0
Viscosity	50 – 100 mPa·s
Surface Tension	0.020 - 0.030 N/m
Sediment	Sediment Free
Recommended Operating Range	0°C to 60°C
Optimal Storage	20°C
Distance To Electrical Appliances	1000V at 1 m distance
EN3 Certifications	34A (TÜV, BSI & UL)

Why WFP Performs Better

WildFirePro contains ingredients that create a three-way endothermic reaction, absorbing heat at speed and driving temperatures below ignition thresholds. As heat is reduced, the chemical layer remains to prevent re-ignition. The rapid cooling effect also reduces smoke production.

Performance Testing

WildFirePro has been independently tested to recognised international standards:

- TÜV – EN3 Class A
- BSI – Carbonaceous Material (Wood)
- Apragaz – EN12496 Class A Wood
- UL – Recognised Component, Class A
- WGK 1 – Compliant
- Crop Intellect – Safe for crops and plant life
- DETS (Derwentside Enviromental Testing services)
 - BOD - Biochemical Oxygen Demand
 - COD - Chemical Oxygen Demand

Applications

WildFirePro is designed for:

- ✓ Active wildland, bush, and forest fires
- ✓ Creating aqueous firebreaks
- ✓ Pre-treatment retardant for vegetation
- ✓ Pre-treatment of firebreaks to protect WUI communities and infrastructure
- ✓ Smoke reduction
- ✓ Operations where water availability is limited

Compatible delivery systems.

WildFirePro has been successfully tested with:

- ✓ EN3-approved cylinder at 12 bar (Rose nozzle)
- ✓ UL-approved Ammerex cylinder at 10 bar (water nozzle)

Its low-viscosity formulation enables delivery via standard fire service equipment, backpack systems, portable pumps, aviation buckets, and other pressure fed systems.

Material Compatibility

DEKRA corrosion testing (2018 & 2023):

Material	Compatibility
Steel	Compatible
Bronze	Compatible
Rubber	Compatible
Aluminium	Not compatible do not store in unlined AL cylinder, after brief contact with AL please flush carefully

Rubber seals:

Material	Result
Nitrile (NBR)	Excellent
EPDM	Excellent
Viton	Good (slight caution)
PTFE	Excellent
PVC	Excellent
Polypropylene	Excellent
Neoprene	Excellent

Storage & Shelf Life

- Possible storage temperature -10 – 60°C
- Recommended shelf life 5 years
- Supplied in 1000-litre PE IBCs
- No mixing or agitation required prior to use

Environmental Profile

WildFirePro is formulated with environmental responsibility in mind.

- No fluorine’s added
- Non-toxic
- Designed for rapid biodegradation (>90% in 28 days)
- WGK 1 compliant

PFAS Compliance

WildFirePro FER1000 meets the PFAS restrictions set out in Commission Regulation (EU) 2025/1988, which limits firefighting foams to <1 mg/L PFAS (sum of all PFAS).

Independent laboratory testing confirms:

- Individual PFAS < 25 ppb
- Sum of targeted PFAS < 250 ppb
- Total Organic Fluorine (TOF) < 50 ppm

WildFirePro contains no intentionally added PFAS, including fluorinated surfactants or fluorotelomer based C6 chemistries. Any trace PFAS detected is at levels consistent with environmental background or analytical detection limits and remains far below the regulatory threshold.

Application Rates

WildFirePro application requirements depend on fuel load and operational objective. Flow rate (L/min) is determined by the delivery system, while application density (L/m²) determines how much product must reach the fuel bed to deliver effective cooling, penetration, and retardancy.

Application density by fuel load.

Fuel Type	Fuel Load Characteristics	Recommended Application Density (L/m ²)	Operational Notes
Grassland / Fine Fuels	Low thermal mass; shallow fuel bed	2.0 L/m ²	Uniform coverage; penetration easily achieved
Brush / Mixed Vegetation	Moderate thermal mass; uneven fuel bed	2.5–3.0 L/m ²	Ensure product reaches base of fuels; avoid surface-only wetting
Forest Floor / Heavy Duff	High thermal mass; deep organic layer	4.0 L/m ²	Deep saturation required; multiple passes may be needed

Flow rate guidance.

Delivery System	Typical Flow Rate (L/min)	Notes
EN3 / UL Extinguisher	0.5 - 1.0 L/min	Suitable for spot fires and fine fuels
Backpack / Portable Pump	1 - 4 L/min	Ideal for line building and pre-treatment
Fire Service Pump / Hose Line	40 - 200+ L/min	High-volume delivery for heavy fuels and large-area saturation
Aviation Bucket / Drop System	Variable	Density determined by coverage pattern and drop height

Transport & Disposal

- Low environmental risk phosphate/salt formulation
- Standard disposal procedures apply
- Compatible with conventional wash-down practices
- No special transport classification indicated

PPE: Nitrile gloves and basic safety glasses recommended.

Handling: Wash hands after use; prolonged exposure to salt-based products may cause mild skin irritation.

First Aid: Eye bath with water if contact occurs.

Operational Use Cases

Class A – Active Fire.

- Application Density: Up to 4.0 L/m² (fuel-dependent)
- Objective: Deep penetration, rapid heat extraction, re-ignition prevention
- Firebreak Width: 1.5–2× flame height (operational conditions dependant)

Class A – Pre-Treatment (Retardant Line).

- Application Density: 2.0 L/m² (higher for heavier fuels)
- Objective: Create a retardant barrier; salts remain effective after water evaporates
- Use Cases: WUI protection, indirect attack, infrastructure defence

Environmental Data.

- Organic constituents: readily biodegradable (>90% in 28 days)
- Inorganic constituents: naturally occurring minerals; assimilated as plant nutrients
- PFAS compliant
- VOC content: zero except trace surfactant
- Eco-tox: not classified as hazardous under CLP/GHS; nutrient loading monitored

For detailed safety, handling, environmental, and regulatory information, refer to the Safety Data Sheet (SDS).