

# F-500 Encapsulator Agent

Next generation, eco-friendly, fluorine free, reliable and most versatile firefighting agent available.

- › Effective on 98% of fires
- › Fully extinguishes lithium-ion battery fires
- › Saves up to 80% water
- › Encapsulates fuels, gases and toxins
- › Superior heat dissipation and cooling properties
- › Eco-friendly, non-hazardous and readily biodegradable

## Product Details

Innovative Encapsulator Technology provides this multi-purpose firefighting agent with unique properties, allowing effective application on class A, class B, class D and class F/K fires. It currently is the sole technology to fully and sustainably extinguish lithium-ion battery fires. Actively intervening in a thermal runaway, F-500 EA encapsulates the electrolyte and rapidly cools the battery as well as surrounding structures below critical temperatures. For class D fires, F-500 EA currently is the only available water-based extinguishing technology in the market. F-500 EA can be used on certain combustible metals, such as aluminum, magnesium, titanium and other. Also, F-500 EA works exceptionally well with three dimensional fires.

F-500 EA is proven, tested, widely certified and can be used with existing, standard equipment, such as sprinklers, hydrants, fog/mist systems or mobile solutions. Foam based extinguishing systems can easily be retrofitted for use with F-500 EA. Fire and rescue services can use the unique venturi Turbo Nozzle, exclusively produced by AWG fittings. F-500 EA is certified for use in many proportioning appliances and systems. The F-500 EA concentrate is admixed to water at a ratio of 0.1% to 3%, depending on application. It is just as effective in closed rooms as in outdoor applications.

F-500 EA is approved for use to extinguish Class A and Class B fires according to DIN EN2 (MPA Dresden, SP83/08), also according to UL and NFPA ("Encapsulator Agent" in accordance with NFPA 18A). It is approved for maritime use by RINA and is MED-certified ("Wheelmark"). F-500 EA complies with legal standards with regards to safety, toxicity and hygiene. It is fluorine free, non-toxic, non-hazardous and eco-compatible. F-500 EA is readily biodegradable (OECD 306 & OECD 301b) and REACH compliant. Up to 3% admixture of F-500 EA to water is non-hazardous and meets the German Water Hazard Classification of 0 (VwVwS 1999, version dated 2005). There is no fire extinguishing agent with a lower water hazard classification. Non-hazardous waste under RCRA CFR261.

## Areas of Application

- › Ordinary combustibles such as wood, paper, fabric, plastics (Class A)
- › Flammable liquids and gases (Class B/C)
- › Lithium-Ion battery fires
- › Combustible metal alloy fires, such aluminum, magnesium, titanium and others (Class D)
- › Cooking oils and fats (Class F/K)

## Technical Data

Description	F-500 EA 20 Liter	F-500 EA 1000 Liter
Container	Canister	IBC
Size (W × H × D)	30,5 × 38,1 × 24,1 cm	100 × 116 × 120 cm
Weight	20,5 kg	1050 kg
Admixture	0,1 % - 3 %	0,1 % - 3 %
Storage Temperature	-3°C bis +60°C	-3°C bis +60°C
Shelf life	15 years	15 years
Article Number	F500EA-0020L	F500EA-1000L



1000 liters

20 liters

## Advantages

**F-500 Encapsulating Agent is a liquid concentrate which is admixed to water. This innovative technology brings several proven advantages:**

- › **Encapsulating technology:** When admixed to water, F-500 EA forms stable, spherical micelles (in accordance with NFPA 18A), encapsulating fuels and flammable substances on a molecular level, permanently rendering them nonflammable and non-ignitable. Fires lose their fuels as a result of this innovative technology. Also, toxins, smoke and soot are encapsulated within the stable, spherical micelles (e.g. fluorine compounds with battery fires)
- › **Superior cooling:** F-500 EA reduces the evaporating temperature of water to 70 °C by impacting the hydrogen bonds of water. Heat energy from fires dissipates rapidly, surfaces and structures cool down substantially quicker.
- › **Surface tension:** F-500 EA reduces the surface tension of water by more than 50%. This creates smaller water droplets, increasing the available water surface for cooling and encapsulation. The reduced surface tension also allows for highly improved surface penetration and surface activity of the extinguishing water, helping F-500 EA to spread quicker and get to where it is needed.
- › **Battery fires:** As stated in NFPA 18A, F-500 EA is able to fully and sustainably extinguish lithium-ion battery fires. Actively intervening in a thermal runaway, F-500 EA encapsulates the electrolyte and rapidly cools the battery as well as surrounding structures below critical temperatures.

**F-500 EA**

