



**Insurance Services Office (ISO)
FSRS Equivalency List
Credit Recognition**

PRODUCT APPLICATION BULLETIN

After Years of Comparisons, F-500 Encapsulator Agent is Declared the Winner!



F-500 Encapsulator Agent has been used successfully to extinguish tens of thousands of fires around the world. In most cases, the firefighters know and trust F-500 EA to do the job. Occasionally, we come across situations where F-500 EA goes head to head with foam or water, with striking results. It's easy for our competitors to say they are as good as F-500 EA, but in a direct comparison, F-500 EA wins every time.

In terms of saving lives and reducing the risk to firefighters, the faster you can extinguish a fire, the better. When it comes down to economics, there's a list of reasons why F-500 EA should be the firefighting agent of choice. First, with faster extinguishment, less agent is used. Faster knockdown means less damage to structures. Much less F-500 EA is used compared to foam, especially in the case of Class B and three-dimensional fires. With less agent, you use less water, meaning less run-off, less need for dykes and less potential for fines. In addition, F-500 EA works on Class A, Class B nonpolar and Class B polar solvents and Class D fires, so there's no need to inventory three different foams and powders.

F-500 EA drastically cools a fire - remove the heat; remove the fire. An example of this amazing cooling ability

is applying F-500 EA directly on burning titanium or magnesium. Foam or water will explode if applied as the water turns into hydrogen and oxygen, but only F-500 EA will go to work cooling the metal. Applying powder does nothing to cool the metal, so reignition occurs.

F-500 EA also works on three-dimensional fires, unlike foams, which need to form a blanket and smother the fire. As we know, almost every fire is three-dimensional. Even NFPA 11, Annex A.1.1 states, "Foam is not suitable for three-dimensional flowing liquid fuel fires or for gas fires." F-500 EA also encapsulates Class B fuels, rendering them nonflammable and nonignitable. In fact, in the case of a Class B fuel spill, after extinguishment, the resulting F-500 EA and encapsulated fuel can be left to evaporate, if allowed by local regulations, or vacuumed and hauled away as a safe, nonflammable solution.

The list on the back includes real world comparisons where foam or water was not able to do the job and serious test comparisons where companies or fire departments wanted to document for themselves before committing to this unique product. The successes shown on the back can be attributed to F-500 EA's ability to cool, encapsulate and fight three-dimensional fires.

F-500 Encapsulator Agent Outperforms Other Agents

Time after time, around the world, F-500 Encapsulator Agent shows its incredible versatility against multiple fire hazards. Below are real world examples where other agents failed and F-500 EA succeeded, as well as situations where F-500 EA simply worked faster. Faster extinguishment reduces risk and means less agent, water and manpower are wasted.

| Event and Location | Fuel | Time to Extinguish | | Comments |
|--|---|--------------------------------------|--|--|
| | | F-500 EA | Other Agent | |
| Reisser AG Böblingen, Germany | Factory and Warehouse | 5 hours | AFFF could not cool | Protected attached office building from direct flames for 5 hours |
| Rickmers (cargo ship) South China Sea | Magnesium, chemicals, tires | 5 hours | AFFF - 80 hours - ineffective | Twelve 5-gallon pails of F-500 EA were used |
| Tire Fire Watertown, WI | One million tires | 12 hours - Fire controlled | Water was ineffective due to extreme heat | Largest fire in Wisconsin |
| Tire Fire Gila River, AZ | One million tires | One day | Water was applied for 5 days without success | Fire spread while water applications failed |
| Continental Flight 3407 Clarence Center, NY | Jet fuel, aluminum, natural gas | Less than one hour | No foam was used | Fire was extinguished before foam truck arrived |
| Transformer Fire Queens, NY | Mineral oil, hot metal | 2 minutes | AFFF foam and Purple K failed | Foams are ineffective on 3D fires and powders don't remove the heat, resulting in reignition |
| Stern Oil Council Bluffs, IA | 21 tanks of oil | 2 1/2 hours | AFFF Mil spec foam - 4 1/2 hours | Two airport crash trucks applied foam without success |
| Lubritalia Tarranto, Italy | Oil | 15 minutes | AFFF foam was applied for hours | Four Fire Departments applied foam - ineffective |
| Tank Fire Demo Shandong, China | Petroleum | 58 seconds | 7 minutes, 35 seconds | 15 times more foam was used |
| British Petroleum Das Island, England | Crude oil testing | Average: 26.75 seconds | Average: 180.5 seconds | Knockdown was 6.5 times faster using 85% less agent |
| Goldman Titanium Buffalo, NY | Titanium | 20 minutes | Soda Acid meant for metals - ineffective | Foam explodes as plain water hits burning titanium |
| Barn Fire Madison, IN | Class A materials | Immediate knockdown | CAFS Class A foam was ineffective | Second alarm fire department saved the day with F-500 EA |
| CTA Acoustics Plant Corbin, KY | Various Class B chemicals | 25 minutes | AFFF was applied for 1 1/2 hours - ineffective | F-500 encapsulates Class B fuels making them nonflammable |
| Industrial Spray Booth Grand Rapids, MI | Various petroleum products | 2 minutes | CO ₂ , dry chemicals, AFFF and water failed | F-500 EA outperforms most agents in most applications |
| Dominion (Power) Chester, VA | Sprinkler testing -diesel | 32 seconds | Water-1 minute, 58 seconds | Testing proved F-500 EA increases effectiveness |
| Ajax Chubb - Fire Extinguisher Demo | Gasoline | 1 second | AFFF - 14 seconds | F-500 EA instantly encapsulates flammable vapors |
| Car Fire West Thurston, WA | Magnesium, gasoline, brush fire | 30 seconds | Water failed | Water can't extinguish magnesium used on newer cars |
| Underground Fire Hilton Head, SC | Peat | 5 hours | Class A & B foams - 8 days - ineffective | Foams used a million gallons of water and failed |
| Fire Departments Coffey County, KS | 40 tires - testing | 10 seconds | CAFS applied Class A foam; 2 mins, 12 secs | F-500 EA extinguished tires 13 times faster than foam |
| Kansas Ethanol Institute Kansas | 650-gallons of Ethanol (E190) in a 27-foot diameter pit | 50 seconds using 3-gals. of F-500 EA | AR-AFFF -5 minutes, 10 seconds (40-gals. of foam) | AFFF failed to extinguish; AR-AFFF later reignited |



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