



**PRODUCT APPLICATION BULLETIN**

**Ethanol and Ethanol Blended Fuels**

The use of ethanol as a blended fuel component in gasoline is steadily increasing. The Renewable Fuels Standard Requirements under the Energy Policy Act of 2005 (P.L. 109-58) require renewable fuel usage to increase by 87.5% between 2006 and 2012. It is expected that the majority of this requirement will be met with ethanol.<sup>1</sup>

According to the U.S. Department of Transportation, ethanol/gasoline mixtures, such as E85, containing more than 10% ethanol will degrade the effectiveness of firefighting foam that is not alcohol-resistant.

**F-500 is Effective on Ethanol and Ethanol Blended Fuel Fires**

There is a misconception that only AR-AFFF will work on ethanol and ethanol blend fuel fires. AR-AFFF must be air-aspirated and applied in a way that ensures the formation of a foam blanket to smother the fire. This thick foam layer must be maintained to prevent reignition while the residual heat from the fire gradually disipates.

F-500 has been proven to be extremely effective, quickly controlling and suppressing the fire, in a fraction of the time that foam takes. F-500 can be applied through virtually any type of apparatus, and by using a fog pattern and sweeping motion, will rapidly reduce the heat, suppress the fire, and neutralize any hydrocarbon component to the fuel.

- F-500 is not foam and does not rely on the formation and maintenance of a foam blanket to be effective.
- F-500 has the ability to neutralize flammable hydrocarbon vapors and liquids.

**F-500 Real World Test Report:**

In actual live fire testing by Kansas Ethanol, LLC, F-500 was shown to be superior to AR-AFFF in extinguishing a fuel-in-depth, ethanol fire.

**Test Scenario:** 650 Gallons Ethanol (E-190) in a 6’ high x 27’ diameter pan with clay bottom and thin water base.

<b>Firefighting Agent:</b>	<b>3% F-500 Encapsulator Technology</b>	<b>6% AR-AFFF</b>
<b>Application Method:</b>	125gpm type III nozzle	125gpm foam tube
<b>Time to Extinguish:</b>	0 min, 50 seconds	5 min, 20 seconds
<b>Solution Applied:</b>	104 Gallons	667 Gallons
<b>Concentrate Used:</b>	3 Gallons (Less than 1 Pail)	40 Gallons (8 Pails)

<sup>1</sup> CRS Report for Congress, “Fuel Ethanol: Background and Public Policy Issues”, March 3, 2006