
Minnesota State Volunteer Fire Fighters Association Inc.

Message From The Chair

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Ethanol Hazards and Safety Concerns

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Welcome Minnesota Firefighters

The MSVFA would like to welcome you to this website. Our purpose is to inform you and to offer benefits to you as they become available by businesses in the Great State of Minnesota.

One item of paramount concern top the MSVFA is the increasing use of ethanol in our vehicles. With this emerging fuel fast becoming a staple of our fuel alternatives we need to, as volunteers ask each and every department that you serve on to quickly bring you the training that is necessary to fight ethanol spills and fires.

As I write this column many firefighters in Minnesota believe that you can spray our old reliable class A or class B foam on these types of fires and they will go out. Quite the opposite is the case and in most cases will only serve to slow the spread an ethanol fire.

Emergency responders need to understand that standard firefighting foams will not control gasoline blends containing more than 10 percent concentrations of polar solvents. These blends will require use of alcohol resistant foam.

The foam that has to be utilized is AR-AFFF which is a foam agent that successfully passed the UL162 tests against both E10 and E85/95 and is considerably different than the foam we all have at the fire hall and on our trucks.

Alcohol-Resistant Aqueous Film Forming Foam (AR-AFFF) which is used at 1%, 3% or 6% concentration to extinguish fires in hydrocarbon fuels. AR-AFFF foam is used to extinguish hydrocarbon and polar-solvent (water-miscible) fires, fires from a mixture of these fuels, and oxygenated motor fuels. It is suitable for use with foam compatible dry powder extinguishing agents.

AR-AFFF concentrate with a special biosynthesized polymer. This polymer is designed to fulfill two functions. The first is to form a protective membrane between the fuel and the foam as it contacts the water miscible fuel, making extinguishment possible. The second function is to make the foam more stable and heat resistant, resulting in better burnback resistance and sealability compared to conventional AFFFs.

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Some firefighters have already trained for this type of fire, most have not and to insure the safety of the firefighters, (you & all others) is imperative that this training happen quickly to reduce the possibility of an accident(s).

Keeping pace with the new alternatives will be a challenge for all firefighters, as we move away from fossil fuels to other renewable and reusable methods. As fuel prices continue to rise don't be surprised if you find a few garage ethanol stills in your service area such as the type shown on this website <http://www.efuel100.com/>.

With the right foam in the right system and the right training, we may learn to deal with ethanol as just another typical work day hazmat challenge.

The MSVFA will be happy to assist you in obtaining materials and resources to give to your firefighters this valuable information to keep YOU safe!!!

God Bless and stay safe!

Calvin Larson
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