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Proper Placarding of “Alternative Fuels”

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With the volatile situation in the Middle East affecting the oil futures market, continued emphasis is being placed on “alternative fuels”. These fuels can be as benign as nonhazardous 100% biodiesel made from vegetable oils or animal fat to highly flammable ethyl alcohol or ethanol fuel. In order to extend the useable energy from one barrel of petroleum oil, these alternative fuels are being blended or mixed with the petroleum oil for use in our automobiles or heating our homes. Since 2007, the Pipeline Hazardous Materials Safety Administration has provided guidance for the safe transportation of these newly created products.

There has been much confusion among bulk liquid transporters on how to properly placard these products. This confusion creates concerns for emergency responders having to address the hazards while protecting the public and environment when releases occur. The initial response is predicated on that placard affixed to the transport vehicle. Sadly, incorrect placards expose responders to dangers they are not expecting. Too many placarding violations are being discovered during roadside inspections which affect not only a company’s CSA score but more so, the safety of the first responder.

Of particular concern is a bulk transport vehicle hauling gasoline blended with more than 10% ethanol being placarded with a Flammable Liquid Flammable 3 with a UN or NA 1203 ID marking. In case of a release, that 1203 marking dictates the first responder to apply conventional Aqueous Film-Forming Foam (AFFF) to prevent or smother the petroleum fed fire. With a mixture greater than 10% ethanol, that AFFF would be ineffective. Why? The mixture is a polar/water-miscible flammable liquid and mixes readily with water which degrades the water based AFFF. Instead of AFFF, the responder must apply an Alcohol Resistant Film-Forming Fluoroprotein Foam (AR-FFF). The only way the first responder would know to use this proper retardant is if the correct placard annotating the UN 3475 ID marking was used.



In addition, a seemingly harmless load of biodiesel made from vegetable oil now becomes hazardous when mixed or blended with petroleum based diesel. Why? The mixture now takes on the inherent flashpoint of the petroleum based product which makes it a flammable or combustible liquid and must be placarded with the proper NA1993 or UN1202 ID marking.

All Safety Directors, Managers and Supervisors should review those violations documented on their Cargo Related BASIC in FMCSA CSA SMS to correct discrepancies. Don’t wait until a catastrophic incident results in the injury or death of an emergency responder due to improper or no placards being affixed. Further information can be obtained directly from the PHMSA at:

phmsa.hm-infocenter@dot.gov or telephone: 1-800-467-4922