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**COMMITTEE OF EXPERTS ON THE TRANSPORT OF  
DANGEROUS GOODS AND ON THE GLOBALLY  
HARMONIZED SYSTEM OF CLASSIFICATION  
AND LABELLING OF CHEMICALS**

Sub-Committee of Experts on the  
Transport of Dangerous Goods

Twenty-ninth session  
Geneva, 3-12 (a.m.) July 2006  
Item 6 of the provisional agenda

**LISTING, CLASSIFICATION AND PACKING**

Ethanol and Gasoline Fuel Mixtures

Transmitted by the expert from the United States of America

**Background**

At the twenty-sixth session of the Sub-Committee held in December 2004, the expert from the United States submitted ST/SG/AC.10/C.3/2004/91, which resulted in Special Provision 330 being placed against UN1170, UN1987 and UN1993. Special Provision 330 allows alcohol that contains 5% of a petroleum product, such as gasoline, to be transported under UN No. 1987.

While the addition of SP330 solved an immediate problem, it did not comprehensively address the growing use of alternative fuels with varying percentages of ethanol and gasoline. Major car manufacturers are now producing flexible fuel vehicles that are designed to operate on fuels containing much higher percentages of ethanol than those addressed by SP 330. An example of such a fuel is a mixture of 85% ethanol and 15% gasoline known as E85. Although such a mixture may be described as UN1993, FLAMMABLE LIQUID, N.O.S., this name does not immediately communicate the presence of alcohol in the mixture. This can pose problems in terms of emergency response and firefighting techniques. The use of standard foam is not as

efficient on polar materials (alcohol blends) where the use of alcohol-resistant foams would be recommended instead.

There is growing interest in producing flexible fuel vehicles and making ethanol and gasoline fuels more widely available. With the undiminished rise in gasoline prices and the finite nature of fossil fuels, it would seem that alternative fuels have a future. In order to more clearly communicate the presence of alcohol in mixtures such as E85, it is proposed that a new name be created to specifically address such mixtures. Research has shown that the percentage at which alcohol begins to impede the ability of standard fire-fighting foams is 10%, for this reason it is proposed that the name "ETHANOL AND GASOLINE MIXTURE, with more than 10% ethanol" be considered. Since gasoline and ethanol are both assigned packing group II, a single PG II entry is proposed.

With the addition of this more specific name, SP 330 could be deleted. The provision was added to address mixtures of ethanol and gasoline with up to 5% gasoline. The expert of the United States is not aware of any fuel blends using alcohols other than ethanol or petroleum products other than gasoline.

A safety alert for emergency responders relative to E85 fuel has been placed on the US DOT web site at [http://hazmat.dot.gov/E-85\\_042606.pdf](http://hazmat.dot.gov/E-85_042606.pdf).

## Proposals

1. Add the following entry to the Dangerous Goods List:

UN No.	Name and description	Class or division	Subsidiary risk	UN packing group	Special provisions	Limited quantities	Packagings and IBCs		Portable tanks and bulk containers	
							Packing instruction	Special packing provisions	Instructions	Special provisions
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
XXXX	ETHANOL AND GASOLINE MIXTURE or ETHANOL AND MOTOR SPIRIT MIXTURE or ETHANOL AND PETROL MIXTURE, with more than 10% ethanol	3		II	AAA	1 L	P001 [IBC02]		T4	TP1

2. Delete Special Provision 330 from Chapter 3.3 and from the entries for UN1170, UN1987 and UN1993.
3. Special Provision AAA Ethanol and gasoline, motor spirit or petrol mixtures for use in spark-ignition engines (e.g. in automobiles, stationary engines and other engines) shall be assigned to this entry regardless of variations in volatility.