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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-sixth session, 29 November-3 December 2004  
Item 3 (c) of the provisional agenda

**OUTSTANDING ISSUES OR PROPOSALS OF AMENDMENTS TO THE RECOMMENDATIONS  
ON THE TRANSPORT OF DANGEROUS GOODS**

Miscellaneous proposals

New entry for fuel cell cartridges containing flammable liquids

Transmitted by the expert from the United States of America

**Introduction**

1. At the 25th session of the Sub-Committee meeting the experts from Japan and the United States of America proposed to classify fuel cell cartridges containing methanol in Class 9 (see ST/SG/AC.10/C.3/2004/49). The proposal was discussed and the Sub-Committee accepted the need to create a new entry for fuel cell cartridges, but did not adopt the proposal to assign cartridges containing flammable liquids to Class 9. The experts from the United States of America and Japan were invited to prepare new proposals for consideration at the December 2004 session.

2. Fuel cells are likely to be found in many types of consumer electronics in the near future. Due to the forecasted volume of fuel cell cartridges containing flammable liquids in international commerce, it is considered necessary to provide a specific entry for these articles. Comments and opinions expressed during and after the discussions at the 25th session of the Sub-Committee indicate that many experts believe fuel cell cartridges containing methanol should be assigned to Class 3. On this basis, it is proposed to create a new entry for fuel cell cartridges containing flammable liquids in Class 3. Based on the comments from several experts, a new entry for fuel cell cartridges contained in equipment is not proposed because it is agreed that they can be transported using the existing entry "DANGEROUS GOODS IN MACHINERY or DANGEROUS GOODS IN APPARATUS, UN 3363, Class 9".

**Proposals**

3. Add a new entry to the Dangerous Goods List as follows:

UN No.	Name and description	Class	Sub-risk	PG	SP	LQ	Packagings and IBCs		Portable tanks	
							Packing instruction	Special provisions	Portable tank instruction	Portable tank special provisions
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
34xx	<b>Fuel Cell Cartridges</b> <i>containing flammable liquids</i>	3		III	xxx	1 L	P001	PPxx		

4. Create a new Special Provision as follows:

"SP xxx: This entry applies to fuel cell cartridges containing flammable liquids including methanol or methanol/water solutions. Fuel cell cartridge means a container that stores fuel for discharge into fuel cell powered equipment through a valve(s) that controls the discharge of fuel into such equipment and is free of electric charge generating components. The cartridge shall be designed and constructed to prevent the fuel from leaking during normal conditions of transport.

This entry applies to fuel cell cartridge design types shown without their packaging to pass an internal pressure test at a pressure of 100 kPa (gauge)."

5. In P001 add a new PPxx as follows:

"PPxx For UN 34xx when fuel cell cartridges are packed with equipment, they shall be packed in inner packagings or placed in the outer packaging with cushioning material so that the cartridges are protected against damage that may be caused by the movement or placement of the equipment and the cartridges within the outer packaging."