



Secretariat

Distr.
GENERAL

ST/SG/AC.10/C.3/2008/34
9 April 2008

Original: ENGLISH

**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

Thirty-third session
Geneva, 30 June-9 July (a.m.) 2008
Item 4 of the provisional agenda

LISTING, CLASSIFICATION AND PACKING

**UN 3166, ENGINE INTERNAL COMBUSTION or VEHICLE, FLAMMABLE GAS
POWERED or, VEHICLE, FLAMMABLE LIQUID POWERED**

Transmitted by the US Fuel Cell Council*

Background

1. The entry UN 3171, BATTERY POWERED VEHICLE or BATTERY POWERED EQUIPMENT, applies to vehicles and equipment powered by wet batteries, sodium batteries or lithium batteries and transported with these batteries installed. Examples of such vehicles and equipment are electrically-powered cars, lawnmowers, wheelchairs and other mobility aids. Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries or lithium batteries, transported with the battery(ies) installed are consigned under the entries VEHICLE, FLAMMABLE GAS POWERED or VEHICLE, FLAMMABLE LIQUID POWERED as appropriate and, as specified by SP 240 and SP 312. SP 106 which applies to both UN 3171 and UN 3166 clarifies that the Regulations only apply when the vehicle or equipment is transported by air. SP 312 further clarifies that UN 3166 applies to both internal combustion engine vehicles and to hybrid vehicles which are powered by both an internal combustion engine and an electric motor running on batteries.

* In accordance with the programme of work of the Sub-Committee for 2007-2008 approved by the Committee at its third session (refer to ST/SG/AC.10/C.3/60 para. 100 and ST/SG/AC.10/C.3/34, para. 14).

2. Fuel cell powered vehicles have been developed as another alternative to internal combustion engine powered vehicles for some applications including cars, buses, fork lifts, wheelchairs, mobility devices and other self propelled equipment. A fuel cell is an electrochemical device that converts the chemical energy of a fuel and an oxidant to electrical energy (DC power), heat and reaction products (Definition from IEC 62282-6-1). A fuel cell is essentially an electrical generator operating by a chemical reaction without combustion. The electrical power generated by the fuel cell is used in a vehicle to power the electric motors that drive the vehicle or to recharge the installed batteries.

3. Since the hazard involved in transporting and handling vehicles using a fuel cell are the same as the hazards involved in transporting and handling vehicles or equipment using an internal combustion engine, it is proposed to extend the entry for UN 3166 to cover vehicles powered by a fuel cell as follows:

Proposal

4. In section 3.2.1, revise UN 3166 as follows:

3166	ENGINE, INTERNAL COMBUSTION or VEHICLE, FLAMMABLE GAS POWERED or VEHICLE, FLAMMABLE LIQUID POWERED or ENGINE, <u>FUEL CELL or FUEL CELL VEHICLE WITH FLAMMABLE GAS or FUEL CELL VEHICLE WITH FLAMMABLE LIQUID</u>	9			106 312	0	E0	NONE			
------	---	---	--	--	------------	---	----	------	--	--	--

5. In section 3.3.1 amend SP 312 as underlined below:

312 Vehicles which contain an internal combustion engine shall be consigned under the entries UN 3166 VEHICLE, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FLAMMABLE LIQUID POWERED as appropriate. These entries include hybrid electric vehicles powered by both an internal combustion engine; and wet batteries, sodium batteries or lithium batteries, transported with the battery(ies) installed.

Vehicles or equipment which contain a fuel cell, shall be consigned under the entries UN 3166 FUEL CELL VEHICLE WITH FLAMMABLE GAS or UN 3166 FUEL CELL VEHICLE WITH FLAMMABLE LIQUID as appropriate. These entries include hybrid electric vehicles containing both a fuel cell and an internal combustion engine and wet batteries, sodium batteries or lithium batteries, transported with the battery(ies) installed.

6. In section 3.3.1 amend SP 240 as underlined below:

240 This entry only applies to vehicles and equipment powered by wet batteries, sodium batteries or lithium batteries and transported with these batteries installed. Examples of such vehicles and equipment are electrically-powered cars, lawnmowers, wheelchairs and other mobility aids. Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries or lithium batteries, transported with the battery(ies) installed shall be consigned under the entries UN 3166 VEHICLE, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FLAMMABLE LIQUID POWERED, as appropriate. Vehicles which contain a fuel cell shall be consigned under the entries UN 3166 FUEL CELL VEHICLE WITH FLAMMABLE GAS or UN 3166 FUEL CELL VEHICLE WITH FLAMMABLE LIQUID, as appropriate.

7. In the “Alphabetical index of substances and articles” appearing after the appendices at the end of Volume I

Reflect the various alternative Proper Shipping Names for UN 3166
