

## 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

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Item 2 (a) (i) of the provisional agenda

### PROPOSALS OF AMENDMENTS TO THE RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS

Changes to ST/SG/AC.10/C.3/2006/82

Transmitted by the Expert from Canada

#### Background

1. The expert from Canada believes that two paragraphs, namely paragraphs 10 and 12, on page 4 of the proposal contained in ST/SG/AC.10/C.3/2006/82 require clarification.
2. ISO TS 16111:2006 prescribes requirements for units containing hydrogen in metal hydride that have a water capacity up to 150 L but provides for simplified requirements for units with a water capacity less than or equal to 120 ml. These simplified requirements are described in the Annex to ST/SG/AC.10/C.3/2006/82.
3. The proposals in ST/SG/AC.10.C.3/2006/82 are intended to address fuel cell cartridges containing hydrogen in metal hydride with a water capacity less than or equal to 120 ml, as noted in paragraph 3 of the paper.

#### Proposal to amend ST/SG/AC.10.C.3/2006/82

1. **The expert from Canada proposes to correct the reference to ISO TS 16111 and to add a sentence at the end of Item 10 of ST/SG/AC.10.C.3/2006/82, which amends special provision 328, so that the proposed special provision 328 would read as follows with the new modifications underlined and in bold type:**

"328 This entry applies to fuel cell cartridges including when contained in equipment or packed with equipment. Fuel cell cartridges installed in or integral to a fuel cell system are regarded as contained in equipment. Fuel cell cartridge means an article that stores fuel for discharge into the fuel cell through a valve(s) that controls the discharge of fuel into the fuel cell. Fuel cell cartridges, including when contained in

equipment, shall be designed and constructed to prevent fuel leakage under normal conditions of transport.

Fuel cell cartridge design types using liquids as fuels shall pass an internal pressure test at a pressure of 100 kPa (gauge) without leakage.

Except for fuel cell cartridges containing hydrogen in metal hydride which shall be in compliance with ISO TS 16111: 2006, each fuel cell cartridge design type shall be shown to pass a 1.2 meter drop test onto an unyielding surface in the orientation most likely to result in failure of the containment system with no loss of contents.

**Fuel cell cartridges containing hydrogen in metal hydride transported under this shipping name shall have a water capacity less than or equal to 120 ml.**"

2. In Item 12, the expert from Canada proposes to change the first sentence of proposed special provision 3CC to read as follows with the new modifications underlined and in bold type:

"3CC Fuel cell cartridges containing hydrogen in a metal hydride **transported under this shipping name shall have a water capacity less than or equal to 120 ml**, shall be in compliance with ISO TS 16111: **2006** and, except during the fire test, shall pass all the required tests without leakage.

Fuel cell cartridges containing hydrogen in a metal hydride which are transported as limited quantities in accordance with Chapter 3.4 shall have a water capacity less than or equal to 120 ml and shall not contain more than 25 g of hydrogen."

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