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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-eighth session, 28 November-7 December 2005  
Item 3 (b) of the provisional agenda

**PACKAGINGS (INCLUDING IBCS AND LARGE PACKAGINGS)**

Review of Chapter 6.3

Comments on ST/SG/AC.10/C.3/2005/15

Transmitted by the expert from the United States of America

**Introduction**

1. In ST/SG/AC.10/C.3/2005/15 the expert from the United Kingdom indicated that a discrepancy exists between the text in the ICAO TI and the UN Recommendations with respect to the requirement that infectious substance packagings must be capable of meeting a 95 kPa pressure differential test and be able to withstand temperature extremes. During two previous ICAO Dangerous Goods Panel working group meetings the issue of whether the pressure differential test should be conducted at temperature extremes or ambient temperature was discussed without a clear consensus.

2. Pressure differential tests are not normally conducted at temperature extremes. Pressure differential testing is typically performed at ambient temperatures. Many packaging test labs do not have the equipment or capability to perform such tests. While a relatively few package testing laboratories may interpret that the test needs to be conducted at temperature extremes, we believe that this is not the standard practice and not what was intended when the UN text was developed. Conducting the pressure differential test at temperature extremes is unnecessary (the requirement already takes into account the vapour pressure of the material at 55 °C) and not entirely practical (there is no published method that would indicate whether the test would be conducted at the extremes or for instance 5 °C increments ranging from -40 to +55 °C). At lower temperatures the pressure in the ullage space of the package is reduced which results in a less severe test condition.

3. The problem arises due to the difference in the ICAO TI text and the UN text in paragraph 3 of the additional requirements in P620 (602 in the TI). We believe that the UN text is correct but should be clarified to avoid future problems with interpretation.

Current ICAO Text: “The primary receptacle or the secondary packaging used for infectious substances must be capable of withstanding, without leakage, an internal pressure which produces a pressure differential of not less than 95 kPa (0.95 bar, 13.8 lb/in<sup>2</sup>) in the range of –40 °C to +55 °C (-40°F to 130 °F).”

Current UN Text: “Whatever the intended temperature of the consignment, the primary receptacle or the secondary packaging shall be capable of withstanding without leakage an internal pressure producing a pressure differential of not less than 95 kPa and temperatures in the range -40 °C to +55 °C.”

4. The expert from the United States of America proposes to clarify the text in P620 to clearly indicate that it is not necessary to conduct a pressure differential at temperature extremes. We agree with the expert from the United Kingdom that all packagings should be capable of withstanding temperature extremes that may be experienced during normal conditions of transport but since Chapter 4.1 does not reference these temperatures specifically, we are content to leave the temperature references in P620 at this time.

### **Proposal**

5. In P620 replace paragraph 3 with two new paragraphs as follows:

- “3. The primary receptacle or secondary packaging shall be capable of withstanding, without leakage, an internal pressure producing a pressure differential of not less than 95 kPa .
  4. The primary receptacle and secondary packaging used for infectious substances must be capable of withstanding without leakage temperatures in the range of –40 °C to +55 °C.”
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