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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-first session, 1-10 July 2002,
agenda item 6(b))**

PACKAGINGS

Miscellaneous proposals

Use of vented packagings and IBCs

Transmitted by the Dangerous Goods Advisory Council (DGAC)

Background

1. Section 4.1.1 of the UN Model Regulation prescribes general provisions for the packing of dangerous goods “in packagings (including IBCs and large packagings)”. Paragraph 4.1.1.8 in this section provides for the use of vents on “packages” where pressure may develop in the package by the emission of gas from the contents (provided that the gas emitted will not cause danger on account of its toxicity, its flammability, the quantity released, etc.), and includes requirements for such vents. However, whereas most of the paragraphs in Section 4.1.1 specifically refer to “packagings (including IBCs)”, no specific reference is made to IBCs in the provisions for venting. Therefore, it is not entirely clear from this provision that IBCs may be equipped with vents when pressure may be developed from the emission of gas from the contents.
2. At the same time, vents are specifically required for certain substances (see for example, Special Packing Provision B5 in Packing Instruction IBC02). Moreover, experience has shown that it may be necessary to transport substances described under “n.o.s.” or other entries in vented packagings and IBCs in order to avoid over-pressurization due to the emission of gases from those substances. Indeed, marginal 3601(6) of the 1 January 1999 version of the ADR addressed the use of vents on IBCs when necessary to prevent over-pressurization even in the case of substances for which vents were not specifically required. In the restructured ADR, this matter is addressed by an additional sentence in 4.1.1.8 (i.e., one that does not appear in the corresponding UN provision) which provides an affirmative requirement that: “A venting device shall be fitted if dangerous overpressure may develop due to normal decomposition of substances.”
3. To improve the clarity and internal consistency of the Model Regulation, and to better align the UN text with the corresponding text in the restructured ADR (in particular to account for the practical need for the use of vents for certain substances other than those for which vents are specifically required by the packing instructions), the DGAC believes it would be appropriate to amend 4.1.1.8 to:
 - a) Specifically refer to the use of vents on IBCs; and

- b) Provide for the use of vents on packagings and IBCs transporting substances for which vents are not specifically required, when necessary to prevent development of dangerous over-pressure in such packagings and IBCs.

Proposal

4. In 4.1.1.8, amend the existing second and third sentences by adding the words “or IBC” following the words “package” and “packaging” throughout, and by adding a new third sentence to read: “A venting device shall be fitted if dangerous overpressure may develop due to normal decomposition of substances.”

The amended text of 4.1.1.8 would then read (additions indicated by underlining, deletions by strike-out):

“4.1.1.8 Liquids may only be filled into inner packagings which have an appropriate resistance to internal pressure that may be developed under normal conditions of transport. Where pressure may develop in a package or IBC by the emission of gas from the contents (as a result of temperature increase or other cause), the packaging or IBC may be fitted with a vent, provided the gas emitted will not cause danger on account of its toxicity, its flammability, the quantity released, etc. A venting device shall be fitted if dangerous overpressure may develop due to normal decomposition of substances. The vent shall be so designed that, when the packaging or IBC is in the attitude in which it is intended to be transported, leakages of liquid and the penetration of foreign matter are prevented under normal conditions of transport. Venting of the package is not permitted for air transport.”
