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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-fifth session, 5-14 July 2004  
Item 7 of the provisional agenda

MISCELLANEOUS PROPOSALS (Chapters 4.1, 6.1, 6.3, 6.5 and 6.6)

Provisions concerning transport operations by all modes of transport

Revision of Part 7.1.1 Application and general provisions,  
Addition of loading and stacking provisions

Transmitted by the expert from the United Kingdom

**Introduction**

1. The expert of the United Kingdom welcomed the efforts of the expert of Australia in document ST/SG/AC.10/C.3/2003/56 to address problems associated with the loading and stacking of IBCs in transport units by proposing text for Part 7 of the Model Regulations, but suggested that the Sub-Committee should take the opportunity to apply a more generic approach to such issues rather than restricting the proposal to IBCs.
2. In INF.38 submitted at the twenty-fourth session, the expert from the United Kingdom proposed to include new text in Chapter 7.1 without seriously disrupting the existing layout and numbering. The Sub-Committee made a number of helpful comments and asked the expert from the United Kingdom to submit a formal proposal at the next session.

**Proposal**

In the following proposal existing UN text is in normal case and *new text is shown in italics*.

Replace existing 7.1.1 with the following:

**7.1.1 Application, general provisions and loading requirements**

7.1.1.1 This Chapter contains provisions applicable to dangerous goods transport operations by all modes of transport.

7.1.1.2 Dangerous goods shall not be *offered or* accepted for transport, or transported, unless;

- (a) those goods have been properly classified, packaged, marked and labelled,
- (b) *transport units have been appropriately marked, labelled and placarded as appropriate, and* described and certified on a transport document; and
- (c) are otherwise in a condition for transport as required by these Regulations.

**7.1.1.3** *7.1.1.3 Packages containing dangerous goods shall only be loaded in transport units that are strong enough to withstand the shocks and loadings normally encountered during transport, having regard to the conditions to be expected during the anticipated journey. The transport unit shall be constructed in such a way as to prevent the loss of contents during normal conditions of transport, or by changes in temperature, humidity or pressure. Where appropriate the unit shall be fitted with devices to facilitate securing of the loads and the handling of the goods.*

7.1.1.4 *The interior and exterior of transport units shall be inspected prior to loading to ensure that there is no damage that could affect their integrity or that of the packages to be loaded.*

7.1.1.5 *Transport units shall be loaded so as to ensure incompatible dangerous or other goods are properly segregated (see 7.1.2) and that specific loading instructions such as orientation arrows, not to be double stacked, keep dry or temperature control requirements are met. Liquid dangerous goods shall be loaded below dry dangerous goods.*

7.1.1.6 Packages containing dangerous goods shall be secured by suitable means *capable of restraining the load (such as fastening straps, sliding slatboards, adjustable brackets etc)* in the transport unit in a manner that will prevent any movement during the journey which would change the orientation of the packages or cause them to be damaged. *Movement of packages may also be prevented by filling any voids by the use of dunnage or blocking. Where restraints such as banding or straps are used, these shall not be over-tightened to cause damage or deformation of the package. Packages shall not be stacked unless designed for that purpose. Where different design types of packages that have been designed for stacking are to be loaded together, consideration shall be given to their compatibility for stacking with each other. Where necessary, stacked packages shall be prevented from damaging the package below by the use of load-bearing devices.*

7.1.1.7 During loading and unloading, packages containing dangerous goods shall be protected from being damaged. Particular attention shall be paid to the handling of packages during their preparation for transport, the type of transport unit on which they are to be carried and to the method of loading or unloading, so that accidental damage is not caused through dragging or mishandling the packages. *The operator and/or loader shall ensure that packages are fit for transport and that no dangerous residue of the goods adheres to*

*the outside of the package. Packages that appear to be leaking or damaged so that the contents may escape shall not be accepted for transport. If a package is found to be damaged so that the contents leak, the damaged package shall not be transported but moved to a safe place in accordance with instructions given by a responsible person who is familiar with the risks involved and knows the measures that should be taken in an emergency.*

7.1.1.8 During transport, *packages and unpackaged articles* shall be securely fixed or packed into the transport unit so as to prevent undesired lateral or longitudinal movement or impact *likely to cause puncture or other damage* and so as to provide adequate external support. [*Measures to prevent puncture in accident situations shall also be taken.*] **(Last sentence at the request of United States of America but not considered necessary by United Kingdom).**

7.1.1.9 *During transport, portable tanks shall be properly secured to the vehicle chassis or frame (see also 6.7.2.2.8).*

[ 7.1.1.10 *[The Competent Authority shall be able carry out controls during transport, such as opening CTUs, to verify compliance with the provisions above.] (Included at the request of Spain although paragraph 17 page 3 Volume 1 of the Orange Book can be said to cover this)].*

**NOTE 1:** Additional operational requirements for the transport of packages and, IBCs are provided in the special packing provisions for packages and IBCs (see Chapter 4.1).

**NOTE 2:** *Additional guidance on the packing of transport units can be found in the IMO/ILO/UNECE Guidelines for Packing Cargo Transport Units (CTUs) contained in the supplement to the International Maritime Dangerous Goods Code. Modal and National Codes of Practice (such as the Agreement governing the exchange and use of Wagons between Railway Undertakings (RIV 200) Appendix II loading guidelines published by the International Union of Railways (UIC)) or the UK DfT Code of Practice on Safety of Loads on Vehicles) may also be available.*

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