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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-ninth session
Geneva, 3-12 (a.m.) July 2006
Item 4(b) of the provisional agenda

PACKAGINGS (INCLUDING IBCS AND LARGE PACKAGINGS)

IBCs UV Protection

Submitted by the expert from Germany

Introduction

1. Reference is made to item 7 (the report of the informal Working Group on IBCs held in Paris in 2003 (informal document INF.5 of the 28th session of the Sub-Committee), paragraphs 19 and 20 of the report of the Sub-Committee on its 28th session (ST/SG/AC.10/C.3/56) and to the working and information papers related to this issue.
2. The expert from Germany had indicated that she would prepare a proposal, which would take account of the outcome of the discussion of this subject.
3. The following aspects were essential for the proposed text:
 - (a) Implementation of the state of the art of UV protection for the different types of packaging (differentiated approach);

- (b) Provision of a minimum level of protection, representing the statistical ambient conditions of 365 days in the Mediterranean or Florida;
 - (c) No additional marking requirement;
 - (d) Minimum value as material requirement as part of the design requirements for composite IBC's, to be measured by a common, worldwide applicable laboratory test;
 - (e) Preservation of the responsibility of the users to care about the real transport impacts in terms of UV radiation.
4. As the relevant laboratory test standard ISO 4892 specifies that some important parameters are to be subject to agreement, it was necessary to set those parameters in the proposed amendment in order to arrive at a uniform level. However, no restriction is proposed with respect to the type of light source (Xenon lamps as described in ISO 4892, Part 2 or fluorescent tubes as in Part 3), since this would be irrelevant for the comparability of test results.

Proposal 1

5. It is proposed to add an additional paragraph to section 4.1.1, to read as follows:

“4.1.1.X For the transport of plastics bags, drums and jerricans, flexible and rigid plastics IBCs and composite IBCs with plastics inner receptacles, the damaging effects of ultraviolet radiation shall be considered either by appropriate technical measures or by suitable instructions for use and handling”.

Proposal 2

6. It is proposed to amend 6.5.5.4.6 and 6.5.5.4.7 to read as follows and to delete 6.5.5.4.8:

“6.5.5.4.6 The inner receptacle shall be manufactured from suitable plastics material of known specifications and be of adequate strength in relation to its capacity and its intended use. The material shall be adequately resistant to ageing and to degradation caused by the substance contained ~~or, where relevant, by ultraviolet radiation~~. Additives may be incorporated in the material of the inner receptacle to improve the resistance to ageing or to serve other purposes, provided that these do not adversely affect the physical or chemical properties of the material. These additives shall be compatible with the contents and remain effective throughout the life of the inner receptacle. Changes of additives shall not adversely affect the physical properties of the plastics material. Low temperature performance shall be taken into account when appropriate. Any permeation of the substance contained shall not constitute a danger under normal conditions of transport.

6.5.5.4.7 ~~Where p~~ Protection against ultraviolet radiation is required shall be provided by the addition of inhibitors, carbon black or other suitable pigments. The plastics materials of the inner receptacle and service equipment shall be resistant to a radiant exposure of ≥ 6.3 GJ/m² in combination with water spraying, determined in accordance with ISO 4892 -

Plastics – Methods of exposure to laboratory light sources - , using samples in accordance with ISO 527 ((title)) and using a reduction of initial elongation at break to 50% as the test criterion. This requirement does not apply if the material is protected against ultraviolet radiation by secondary means. These additives shall be compatible with the contents and remain effective throughout the life of the inner receptacle. Where use is made of carbon black, pigments or inhibitors, other than those used in the manufacture of the tested design type, retesting may be waived if changes in carbon black content, the pigment content or the inhibitor content do not adversely affect the physical properties of the material of construction.

6.5.5.4.8 Additives may be incorporated in the material of the inner receptacle to improve the resistance to ageing or to serve other purposes, provided that these do not adversely affect the physical or chemical properties of the material.]”.
