



Secretariat

Distr.
GENERAL

ST/SG/AC.10/C.3/2004/76
28 July 2004

ORIGINAL: ENGLISH

**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-sixth session, 29 November-3 December 2004
Item 3 (c) of the provisional agenda

**OUTSTANDING ISSUES OR PROPOSALS OF AMENDMENTS TO THE RECOMMENDATIONS
ON THE TRANSPORT OF DANGEROUS GOODS**

Miscellaneous proposals

Waterproof packagings

Transmitted by the expert from China

Background

Special packing provisions B3 and B4 concerning IBC packing instructions in Chapter 4.1 of the Model Regulations on the Transport of Goods set the requirements for water resistant packaging. The interpretation of water resistant in Chapter 6.1 is: **to prevent the entry moisture, the bag shall be made waterproof** (see 6.1.4.16.4). Reference is also made to "water resistant" in Chapter 6.5, e.g. **13M2 paper, multi-wall water resistant**, but the meaning is not explained. There is no definition of water resistant vessel in Chapter 1.2. This lack of definition entails the questions below.

1. It is not easy to interpret B3 and B4 correctly without a suitable definition of water resistance, and this may cause accidents or legal disputes. For example, in August 2002 at Chinese Qingdao port, an owner of goods used flexible IBC_S (13H2) for the packaging of DICHLOROISOCYANURIC ACID SALTS (UN No. 2465). Due to sudden heavy rain, the container took water and exploded, causing losses of several hundred thousands of U.S. dollars. The goods owner and the harbour company took legal proceedings in Court about the responsibility for cargo damages. The cargo owner thought that he had used the correct container (13H2) according to the Regulations. However, the harbour company considered that packing instruction IBC08 stipulated in B4 that the IBC should be waterproof and should not take in water even if the container was immersed in water. The harbour company thought that the reason why the DICHLOROISOCYANURIC ACID SALTS had reacted with water and exploded was that the cargo owner did not use waterproof containers. Obviously, there was a great difference between the two parties about the meaning of waterproof.

2. The interpretation of waterproof for 5L3, 5H3 and 5M2 in Chapter 6.1 is **to prevent the entry of moisture**. But for the cargoes needing water resistant packaging (e.g. UN1942, UN2001, UN2020, UN3341, UN3342, etc.), the bags authorized by packing instruction P002 also include 5H4, while plastic film bags 5H4 in 6.1.4.17 explain the meaning of **water resistant**. The interpretation of **water resistant** can only be conjectured from 5L3, 5H3 and 5M2. Because the interpretation of **water resistant** is in Chapter 6.1 rather than Chapter 1.2 Definitions, the interpretation may not be common and authoritative. This often causes the difference in the interpretation of **water resistant**, some people thinking that the meaning is to prevent moisture from entering, others thinking that it is rain-proof, others even thinking that it can prevent water from entering when the packaging is immersed in water.

Because of the questions above, it is proposed to add the definition of **waterproof packagings** in Chapter 1.2 (the packagings for liquid must pass relevant leakproofness and hydraulic tests, so that there cannot be a misunderstanding with **water resistant**) just like the definition for **siftproof packagings** (see Chapter 1.2); Otherwise, the meaning of **water resistant** for IBC_s 13H4, 13L3 and BM2 in Chapter 6.5 should be interpreted as that in Chapter 6.1 for 5H3, 5L3 and 5M2. Thus, the safety accidents and legal disputes caused by the different understanding of **water resistant** can be avoided.

Proposal

1. Add the definition of waterproof packagings (for solid) in Chapter 1.2:

"Waterproof packagings (for solids): are packagings for solid substances that can prevent the entry of moisture during transport."

2. Add the interpretation of water resistant in the specific requirements of flexible IBC_s in 6.5.3.2:

"6.5.3.2×: Flexible IBC_s, water resistant, 13H4, 13L4 and 13M2: to prevent the entry of moisture the flexible IBC_s shall be made waterproof, for example by the use of:

- (a) Separate inner liners of water resistant paper (e.g. waxed kraft paper, tarred paper or plastics-coated kraft paper); or
 - (b) Plastics film bonded to the inner surface of the bag; or
 - (c) One or more inner liners made of plastics material."
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