



Secretariat

Distr.
GENERAL

ST/SG/AC.10/C.3/2000/52
20 April 2000

ORIGINAL : ENGLISH

**COMMITTEE OF EXPERTS ON THE TRANSPORT
OF DANGEROUS GOODS**

**Sub-Committee of Experts on the
Transport of Dangerous Goods**
(Eighteenth session, 3-14 July 2000,
agenda item 5 (d))

**MISCELLANEOUS DRAFT AMENDMENTS TO THE MODEL REGULATIONS
ON THE TRANSPORT OF DANGEROUS GOODS**

Packagings

**Rescind stacking test for
flexible IBCs and flexible material large packaging**

Transmitted by the Expert from China

Background

The purpose of the stacking test for flexible IBCs and flexible material large packaging is to examine if they can bear the pressure of stacking. For flexible IBCs and flexible material large packaging, it is the solid goods packed rather than the packages themselves that act as a support while stacking. The packages bear only the outward tension transferred from the pressure of stacking, and this outward tension is far less than the tension produced in the drop test. In other words, the drop test of flexible IBCs and flexible material large packaging can replace the stacking test. To take the examples of woven plastics IBCs (13H) and large packaging (51H), in China, tests are performed according to the Recommendations on the Transport of Dangerous Goods on every batch of woven plastics IBCs (13H) and large packaging (51H) for packaging export dangerous goods. Nearly one thousand tests have been performed every year from 1985 until the present. Non-conformities on the stacking test have never been found while non-conformities have often been found in the drop test. This has no implication regarding the quality of Chinese woven plastics IBCs (13H) and large packaging (51H) but that the stacking test could be totally replaced by the drop test because the nature of the pressure the packages bear in the two circumstances are basically the same.

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Moreover, different kinds of package bags (5L, 5H, 5M) can pile up during storage and transportation. No bags have been damaged due to the pressure from piling. For this reason, there is no demand for the stacking test of package bags (5L, 5H, 5M) in the Recommendations on the Transport of Dangerous Goods. Flexible IBCs and flexible material large packaging should be the same on this point with package bags (5L, 5H, 5M). Thus it is proposed to rescind the demand for the stacking test for flexible IBCs and flexible material large packaging.

Proposal 1

Modify the table in 6.5.4.3.5 as follows:

Before amendment:

Type of IBC	Bottom lift	Top lift a/	Stacking b/	Leak-proofness	Hydraulic pressure	Drop	Tear	Topple	Righting c/
Metal:11A,11B,11N 21A,21B,21N,31A,31B,31N	1st a/ 1st a/	2nd 2nd	3rd 3rd	- 4th	- 5th	4th e/ 6th e/	- -	- -	- -
Flexible d/	-	x c/	x	-	-	x	x	x	x
Rigid Plastic:11H1,11H2, 21H1,21H2,31H1,31H2	1st a/ 1st a/	2nd 2nd	3rd 3rd	- 4th	- 5th	4th 6th	- -	- -	- -
Composite:11HZ1,11HZ2, 21HZ1,21HZ2,31HZ1,31HZ2	1st a/ 1st a/	2nd 2nd	3rd 3rd	- 4th	- 5th	4th e/ 6th e/	- -	- -	- -
Fibreboard	1st	-	2nd	-	-	3rd	-	-	-
Wooden	1st	-	2nd	-	-	3rd	-	-	-

After amendment:

Type of IBC	Bottom lift	Top lift a/	Stacking b/	Leak-proofness	Hydraulic pressure	Drop	Tear	Topple	Righting c/
Metal:11A,11B,11N 21A,21B,21N,31A,31B,31N	1st a/ 1st a/	2nd 2nd	3rd 3rd	- 4th	- 5th	4th e/ 6th e/	- -	- -	- -
Flexible d/	-	x c/	-	-	-	x	x	x	x
Rigid Plastic:11H1,11H2, 21H1,21H2,31H1,31H2	1st a/ 1st a/	2nd 2nd	3rd 3rd	- 4th	- 5th	4th 6th	- -	- -	- -
Composite:11HZ1,11HZ2, 21HZ1,21HZ2,31HZ1,31HZ2	1st a/ 1st a/	2nd 2nd	3rd 3rd	- 4th	- 5th	4th e/ 6th e/	- -	- -	- -
Fibreboard	1st	-	2nd	-	-	3rd	-	-	-
Wooden	1st	-	2nd	-	-	3rd	-	-	-

Proposal 2

Before amendment:

Applicability

For all types of IBC which are designed to be stacked on each other, as a design type test.

After amendment:

Applicability

For all types of IBCs other than flexible IBCs which are designed to be stacked on each other, as a design type test.

Proposal 3

Before amendment:

Applicability

For all types of large packaging which are designed to be stacked on each other, as a design type test.

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After amendment:

Applicability

For all types of large packaging other than flexible material large packagings which are designed to be stacked on each other, as a design type test.
