
**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

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PACKAGINGS (INCLUDING IBCS AND LARGE PACKAGINGS)

Comments on ST/SG/AC.10/C.3/2006/24, Hydraulic Pressure Test for IBCs

Submitted by the expert from Canada

1. The Expert from Canada wishes to thank the expert from Germany for work done in developing the proposal in ST/SC/AC.10/C.3/2006/24. During discussions at the 28th session of this Sub-Committee and at the meeting of the working group on IBCs in 2005 in Paris, the matter of an acceptable level of deformation of UN 31HZ type IBCs during the leakproofness test at 20 kPa was raised as an issue. In line with those discussions, Canada agrees in principle that the leak test is not the appropriate tool for judging the strength of an IBC against deformation. It is our view that allowable deformation criteria should be specified as an acceptance criteria for the hydraulic pressure test. With regret, we have concerns about the approach proposed ST/SG/AC.10/C.3/2006/24.
2. Currently, the Model Recommendations require that a UN 31HZ IBC be subjected to a leakproofness test conducted at 20 kPa for design qualification (6.5.6.7.3), and as a periodic test every 2 and a half years (4.1.2.2 and 6.5.4.4.2). Although the Model Regulations currently allow equally effective leakproofness test methods to be used, application of 20 kPa internal air pressure remains the prescribed standard method of testing. We note that many retesting facilities do conduct retesting by the application of 20 kPa in accordance with the Model Regulations. Satisfying the periodic testing requirements is, of course, required for re-use or continued use of the container. It follows logically in our view that any UN IBC subjected to the leakproofness test at 20 kPa, must not only be free of leakage but must be strong enough not to suffer any permanent deformation or other damage from the testing itself. However, the deformation of the container should not be at issue since the container design must also satisfy the hydraulic pressure test.
3. Currently, the Model Regulations require that IBCs be subjected to a hydraulic pressure test as a design type test. The current acceptance criteria in the case of rigid plastics and composite IBCs for the hydraulic pressure test is for no deformation which would render the IBC unsafe for transport and no leakage(6.5.6.8.5). In the case of UN 31HZ and 31H IBCs, the hydraulic test pressure also determines the maximum vapour pressure of the substances that can be transported in that IBC (6.5.6.8.4.2(b)). Given that the hydraulic test pressure is a criterion determining the substances that may be transported, we view it as entirely

appropriate that the permitted deformation resulting from the hydraulic pressure test for those IBCs be limited as it currently is. We note that most UN 31HZ IBCs are marked as having satisfied a 100 kPa hydraulic test level. As already stated, Canada would support a less subjective and enforceable description of the maximum deformation criterion for the hydraulic pressure test.

4. In ST/SC/AC.10/C.3/2006/24, the acceptance criteria for a successful hydraulic test would no longer apply in the case of rigid plastics and composite IBCs. Instead, the no deformation criterion would apply at a test pressure of only 10 kPa. Canada does not support removal of the no leak / no deformation criteria at hydraulic test pressure without commensurate reconsideration of the substance assignment criteria. Canada is also of the view that the proposed no deformation at 10 kPa test requirement is inadequate given the vapour pressure of substances allowed for transport in IBCs per 6.5.6.8.4.2(b) and the IBC packing instructions, and in terms of IBC robustness.
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