

**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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PERFORMANCE OF PACKAGINGS, INCLUDING IBCs

Comments to document ST/SG/AC.10/C.3/2008/71

Permeation through the walls of plastics

Transmitted by the International Council of Chemical Associations (ICCA)

ICCA would like to offer the following comments on document ST/SG/AC.10/C.3/2008/71:

1. On the one hand sub-section 4.1.3.1 and the new sub-paragraph (c) of 4.1.1.2 require the user/consignor to ensure that their product is compatible with the packaging they intend to use and that it does not allow permeation that could constitute a danger in transport. .
2. On the other hand sub-section 6.1.4.8.1 and sub-section 6.1.5.2.4 in particular, require the manufacturer to ascertain that the packaging is of adequate strength in relation to its intended use. This implies that in addition to the material compatibility also the aspect of permeation under the normal conditions of transport has to be considered if the design type test is carried out with respect to a specific substance or group of substances. Manufacturers of packagings have the complete technical knowledge about the performance of the plastics materials used to produce the packaging and have access to information that provides the precise composition of these materials. In case the design type test is carried out with respect to a specific substance or group of substances to be filled, packaging manufacturers have to be committed not only to evaluate the material compatibility but also to investigate the permeation properties of the packaging.
3. If, as proposed by the United Kingdom, the permeation clause 6.1.4.0 is removed from the construction and testing requirements, the obligation of the manufacturer to check the permeation properties against the filling goods listed and specified in the test report will no longer be applicable. Consequently the UN design type test with respect to these substances will be invalid and the user will have to carry out additional and costly tests in order to get evidence on the permeation properties. This would prove an unnecessary burden on the chemical industry.

4. In RID/ADR (sub-section 4.1.1.19) a procedure has been established for the verification of the chemical compatibility of plastics packagings, including IBCs, by assimilation of the filling substances to standard liquids. Subsection 6.1.5.7 of RID/ADR even allows the use of the standard liquid mixture of hydrocarbons (in this case White Spirit) in the permeability test of plastics packaging to be approved for the carriage of benzene, toluene, xylene or mixtures and preparations containing those substances with comparatively high permeation potential.. If the permeation clause 6.1.4.0 would now be removed from the construction and testing requirements, the obligation of the manufacturer to check the permeation properties for the standard liquids will no longer be applicable. Consequently the UN design type test with respect to the standard liquids will be invalid and the user will have to carry out additional and costly tests in order to get evidence on the permeation properties, even if he is allowed to apply the assimilation procedure. This example would again prove an unnecessary burden on the industry and would invalidate the purpose of the assimilation procedure established in RID/ADR.

5. As a consequence of these comments the chemical industry is proposing, rather than to delete, to revise the text adopted for 6.1.4.0 to read as follows (new text underlined):

“Any permeation of substances contained in the packaging, which are considered by the design type test and listed or specified in the test report, shall not constitute a danger under normal conditions of transport.”

6. In order to remove the inconsistency, mentioned in paragraph 5 of the United Kingdom document it is proposed to introduce this same text also in Chapter 6.5 for IBCs and in Chapter 6.6 for large packagings, respectively at the beginning of sections 6.5.5 and 6.6.4.
