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

(Twentieth session,  
Geneva, 7-16 December 1998,  
agenda item 2 (c)(ii))

**WORK OF THE SUB-COMMITTEE OF EXPERTS  
ON THE TRANSPORT OF DANGEROUS GOODS**

**Draft amendments to the Recommendations  
on the Transport of Dangerous Goods**

**Model Regulations on the Transport of Dangerous Goods**

**N-type packagings**

**Transmitted by the Expert from Germany**

**Introduction**

At the fifteenth session of the Sub-Committee of Experts on the Transport of Dangerous Goods, it was decided that drums of types 1N1 and 1N2 should be included in the requirements for the construction and testing of packagings (see ST/SG/AC.10/C.3/30, paras. 56-57 and ST/SG/AC.10/C.3/30/Add.2, amendments to 6.1.4.1).

The expert from Germany noticed that for certain metals or metal alloys welding is not the appropriate technology for joining the body and chime seams other than for drums constructed of steel or aluminium. Therefore the following requirements for the construction of "N-type drums" are proposed:

**Proposal**

1N1 non-removable head

1N2 removable head

The body and heads shall be constructed of a metal or of a metal alloy other than steel or aluminium. Material shall be of a suitable type and of adequate thickness in relation to the capacity of the drum and to its intended use.

Chime seams, if any, shall be reinforced by the application of separate reinforcing rings. All seams, if any, shall be joined (welded, soldered, etc.) in accordance with the technical state of the art for the used metal or metal alloy.

The body of a drum of a capacity greater than 60 litres shall, in general, have at least two expanded rolling hoops or, alternatively, at least two separate rolling hoops. If there are separate rolling hoops they shall be fitted tightly on the body and so secured that they cannot shift. Rolling hoops shall not be spot welded.

Openings for filling, emptying and venting in the bodies or heads of non-removable head (1N1) drums shall not exceed 7 cm in diameter. Drums with larger openings are considered to be of the removable head type (1N2). Closures for openings in the bodies and heads of drums shall be so designed and applied that they will remain secure and leakproof under normal conditions of transport. Closure flanges shall be joined in place (welded, soldered, etc.) in accordance with the technical state of the art for the used metal or metal alloy so that the seam join is leakproof. Gaskets or other sealing elements shall be used with closures, unless the closure is inherently leakproof.

Closure devices for removable head drums shall be so designed and applied that they will remain secure and drums will remain leakproof under normal conditions of transport. Gaskets or other sealing elements shall be used with all removable heads.

Maximum capacity of drum : 450 litres.

Maximum net mass: 400 kg.

As the construction and use of such packagings may be rare and a relatively new technology, N-type IBC at present should not be included in the Model Regulations. They should be deleted from the proposed Packing Instructions for IBCs.

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