

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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Item 5 of the provisional agenda

Global harmonization of transport of dangerous goods regulations with the Model Regulations

Size of marking

Note by the secretariat

1. According to the second sentence of 5.2.1.1, as amended by ST/SG/AC.10/C.3/2012/68:

“The UN number and the letters “UN” shall be at least 12 mm high, except for packagings of 30 litres of 30 kg capacity or less and except for cylinders of 60 litres water capacity or less, when they shall be at least 6 mm in height and for packagings of 5 litres or 5 kg or less when they shall be of an appropriate size”.

2. Some comments made to the secretariat show that the reference to “packagings of 30 litres or 30 kg capacity or less” and to “packagings of 5 litres or 5 kg or less” is unclear and may lead to enforcement problems for the following reasons:

- (a) “kg” is a mass unit, not a capacity unit;
- (b) A packaging has a water capacity, i.e. its total volume when filled to the brim, and a nominal capacity, i.e. the volume of liquid it is designed to contain taking account of any necessary ullage etc;
- (c) The water capacity is not likely to be known or shown on most packagings and the nominal capacity is not necessarily indicated. Usually the nominal capacity is indicated only on packagings that can be used for measurement purposes;
- (d) What is usually indicated on the label of a package is the nominal contents, i.e. the exact volume or mass of the product contained in the packaging.

3. When transposed into RID/ADR/ADN, this provision was modified to read “except for packages of 30 litres capacity or less or of 30 kg maximum net mass and for cylinders of 60 litres water capacity when they shall be at least 6 mm in height and except for packages of 5 litres or 5 kg or less when they shall be of an appropriate size”.

This formulation solves the problem of “30 kg capacity” but not that of “30 litres capacity” nor that of “packages of 5 litres or 5 kg or less”.

4. Therefore the Sub-Committee may wish to clarify the interpretation of this provision:

- (a) Is the reference to 30 litres capacity intended to mean the maximum capacity as defined in 1.2.1 or the nominal capacity? Or the volume of the contents?
- (b) Is the reference to 30 kg capacity intended to mean the mass of the contents? (net mass of a single packaging; total mass of contents for combining

packagings); or the gross mass of the package? Or the maximum gross mass as marked on the packaging according to 6.1.3.1 (c) (ii)?

(c) Same questions for the references to 5 l/5 kg.

5. When this provision was brought to the attention of IAEA, another question was raised concerning the respective inner and outer volumes of packagings. Due to the shielding, packagings used for the transport of radioactive material may have a very small capacity compared with the overall size of the package. For example a cask designed for the carriage of not more than 25 kg contents of Cobalt 60 may have a height of 1,8 m and a diameter of 1,5 m, with a total mass of nearly 10 tonnes. The size of the characters recommended by IAEA for light weight packages (up to a few hundred kilogrammes) is 12,5 mm, but the recommended size for heavy packages (of ten of tonnes to the hundred tonnes) is 65 mm.

6. Therefore the Sub-Committee may wish to define more precisely the scope of these exceptions.
