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**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

Twenty-ninth session, 3-12 (a.m.) July 2006  
Item 4 (c) of the provisional agenda

**PACKAGINGS (INCLUDING IBCS AND LARGE PACKAGINGS)**

Miscellaneous proposals

Requirements for the construction and testing of packagings  
Materials used for their construction

Transmitted by the expert from Norway

**1. Background**

In the search for safer handling of explosives, particularly in the military environment (Insensitive Munitions – IM), new materials with high resistance to fire are becoming interesting also as materials for packagings for class 1 articles.

The text of 6.1.2.6 lists the materials that may be used for the construction of packagings for dangerous goods, but the new materials do not easily fit in with the present list. One of the most promising materials, and which now will be in use, in particular in the Armed Forces in the United Kingdom and Norway, is most correctly described as a rubber polymer. These new materials, besides having remarkable fire stopping properties (they are used for various purposes on off-shore installations and in petrochemical plants), also have excellent mechanical properties, and have shown in tests run in Norway the ability to withstand two metre drops down to at least – 46 °C. Drop tests have also been run with pallet loads from 24 metres with no damage to the packagings or their contents. Due to their high cost, such materials will probably, for the time being, have little application outside Class 1, but there is nothing preventing such materials from being used for any other dangerous goods in the future. The expert from Norway

is of the opinion that introducing these new materials as acceptable packaging materials in the Recommendations would increase safety.

## **2. Discussion**

The expert from Norway would like to have a discussion on whether these rubber polymers may be accepted as being plastics materials per se, or whether the Sub-Committee is of the opinion that they have to be regarded as new packaging materials.

In the latter case, the expert from Norway would like to underline that the necessary changes to Chapters 4.1 and 6.1 would be significant. Adding a new material would in fact require the full renumbering of the whole section 6.1.4, and amending all cross-references throughout Chapters 4.1 and 6.1. The expert from Norway would therefore prefer a simpler solution by just including such rubber polymers in the plastics materials already prescribed in 6.1.2.6.

## **3. Proposal**

If the Sub-Committee is of the opinion that rubber polymers may be regarded as plastics materials, the expert from Norway proposes that the text of 6.1.2.6 be changed to also include rubber polymers used in fire safe packagings by changing “H” to read: “Plastics materials (including rubber polymers)”.

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