

**Committee of Experts on the Transport of Dangerous Goods  
and on the Globally Harmonized System of Classification  
and Labelling of Chemicals**

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**Sub-Committee of Experts on the  
Transport of Dangerous Goods**

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Item 2 (b) of the provisional agenda

**Explosives and related matters: review of tests in  
parts I, II and III of the Manual of Tests  
and Criteria**

**Inconsequent use of term “a practical explosive or  
pyrotechnic effect” in the Model Regulations and the Manual  
of Tests and Criteria**

**Transmitted by the expert from Sweden**

**Background**

1. After reviewing the use of term “a practical explosive or pyrotechnic effect” in the Model Regulations and in the Manual of Tests and Criteria (MTC), the expert from Sweden believes that this term has been used for different meanings. The inconsequent use of this term causes confusion.
2. The term “a practical explosive or pyrotechnic effect” has been introduced into the Model Regulations as a part of the definition of Class 1 in 2.1.1.1 (c). Whenever this term is used elsewhere in the Model Regulations and in MTC, it either directly refers to 2.1.1.1 (c) (such as in 2.1.3.3.1 of the Model Regulations) or appears to imply reference to 2.1.1.1 (c) (such as in boxes 2 and 35 in the flow charts of Figure 10.2 and 10.3 of MTC). This term is also used in 16.6.1.4.7 (a), 16.6.1.4.7 (b) and 3.1 of APPENDIX 6 in MTC.

**Problem**

3. Substances manufactured with the view of producing an explosive or pyrotechnic effect are always within the scope of Class 1, unless they are expelled from the class due to being too mechanically sensitive or thermally unstable (positive in Test series 3). This is true both for substances comprised by 2.1.1.1(a) and 2.1.1.1(c). Whether the explosive or pyrotechnic effect is termed to be “practical” or not does not matter. However, the use of the term “a practical explosive or pyrotechnic effect” gives the impression that this is only true for substances covered by 2.1.1.1(c), which is misleading.
4. The corresponding reasoning holds also true for articles. Articles, regardless whether they fall within 2.1.1.1(b) or 2.1.1.1(c), that are manufactured with a view of producing an explosive or pyrotechnic effect are within the scope of Class 1, unless they are articles that produce a very minor effect and therefore are excluded by definition of 2.1.1.1(b) or they are articles expelled from Class 1 because they are too sensitive (positive in Test series 4) – regardless of whether the explosive or pyrotechnic effect is termed “practical” or not. The use of the term “a practical explosive or pyrotechnic effect” is also misleading for articles.

5. Another problem related to the above is that there is no definition of what an “explosive effect” or a “pyrotechnic effect” is, and when such an effect is deemed “practical”. This means that in particular definition 2.1.1.1(c) is ambiguous in application, as its application is dependent on the interpretation of the term “a practical explosive or pyrotechnic effect”.

### **Call for action**

6. The expert from Sweden believes that the use of the term “a practical explosive or pyrotechnic effect” in the Model Regulations and in MTC needs to be reviewed in order to avoid potential misunderstandings as explained above, and suggests this is discussed by the Explosives Working Group. The need for defining “explosive or pyrotechnic effect” and “practical explosive or pyrotechnic effect” should also be discussed. In particular, the reference to 2.1.1.1(c) in 2.1.3.3.1 in the Model Regulations needs to be reviewed as it appears to be directly misleading.

7. As any change made in the Model Regulations and MTC could have effects also to the GHS, in particular to Chapter 2.1, consideration should be given also in this regard.

### **Possible way forward**

8. A potential solution might be to strike out the word “practical” in relation to “explosive or pyrotechnic effect” throughout the Model Regulations and MTC. Just using the term “explosive or pyrotechnic effect” in 2.1.1.1(c) should not make any difference. Also by taking out “practical” from Box 2 and 35 of the flow charts in Figures 10.2 and 10.3 of MTC would then correctly imply substances and articles from any of the three definitions (a) – (c) in 2.1.1.1 of the Model Regulations.

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