

**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 Globally  
Harmonized System of Classification  
and Labelling of Chemicals

Eighth session, 7-9 December 2004  
Item 2 (a) of the provisional agenda

UPDATING OF THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION  
AND LABELLING OF CHEMICALS (GHS)

Physical hazards

Note by the secretariat

The document ST/SG/AC.10/C.3/2004/107 submitted to the TDG Sub-Committee for its twenty-sixth session (29 November-7 December 2004) may be of interest to the GHS Sub-Committee for the discussion of the above agenda item. It is reproduced hereafter.



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Sub-Committee of Experts on the  
Transport of Dangerous Goods

Twenty-sixth session, 29 November-3 December 2004  
Item 2 of the provisional agenda

TEXTS ADOPTED BY THE SUB-COMMITTEE AT ITS TWENTY-THIRD, TWENTY-FOURTH  
AND TWENTY-FIFTH SESSIONS AND RELATED PROPOSALS

Amendments to definition of self-reactive substances

Transmitted by the expert from the United States of America

**Background**

The Sub-Committee at the 25th session amended 2.4.2.3.1.1 (b) based on a proposal from France (see ST/SG/AC.10/C.3/50/Add.1). The amended text was put in square brackets because the expert from the United States of America expressed concern regarding the unintended impact the revised text would have on some substances that are currently classified as Division 5.1 oxidizers.

In the opinion of the expert from the United States of America the text of 2.4.2.3.1.1 (b) that was adopted by the Sub-Committee requires further consideration because the text includes inconsistencies, conflicting requirements could result in additional unnecessary testing that will place an undue burden on shippers of products that comprise a mixture of an oxidizer and an organic combustible organic substance. In this paper we have proposed alternative text. However owing to the fact that both Sub-Committees will need to consider the text and the limited time available during the December meetings we would be content to defer adoption of any text to the next biennium.

In our opinion the revised definition will create problems in the following areas:

- (1) It does not specify the concentration limit of the combustible organic substance in the mixture. This implies that a mixture containing an oxidizer and any amount of combustible substance will be required to be subjected to the costly classification tests for self-reactive substances (SRS). To minimize unnecessary classification testing it is necessary to establish a cut-off limit of combustible organic substances that can be

contained in an oxidizer mixture before the mixture is subject to the SRS classification procedure. In our opinion a 5% cut-off limit is appropriate based on our experience in dealing with many of these mixtures.

- (2) According to the new Note 3, a mixture meeting the criteria for oxidizing substances and the Type F SRS criteria (i.e., showing thermally instability (SADT < 75 C) and low explosive power) is reverted back to Div. 5.1 oxidizer. This is not logical and is inconsistent with the first part of 2.4.2.3.1.1 (b) where an oxidizing substance is excluded from classification as a Div. 4.1 SRS. In our opinion this type of mixture should be classified as a Type F SRS.
- (3) According to Note 3, a mixture meeting the criteria for a Type G SRS (SADT < 75 C) is classified as a Div. 5.1 oxidizing substance. This is inconsistent with the first part of 2.4.2.3.1.1 (b). It fails to address what to do about the “thermal instability” hazard of the mixture. In our opinion this type of mixture should be classified as Type G SRS.

### **Proposal**

1. Amend 2.4.2.3.1.1 (b) to read:

“(b) They are oxidizing substances according to the classification procedure for Division 5.1 (see 2.5.2.1.1) except that mixtures of oxidizing substances which contain 5.0% or more of combustible organic substances shall be classified as self-reactive substances according to the procedure defined in Note 3;”

2. Amend Note 3 to read as follows:

*“Note 3: Mixtures of oxidizing substances meeting the criteria of Division 5.1 which contain 5.0% or more of combustible organic substances, which do not meet the criteria mentioned in (a), (c), (d) or (e) above, shall be subjected to the self-reactive substance classification procedure”.*

If this matter requires more time to be decided by both Sub-Committees we are content deferring adoption of any text to the next biennium.

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