



Secretariat

Distr.  
GENERAL

ST/SG/AC.10/C.3/2008/43  
ST/SG/AC.10/C.4/2008/6  
11 April 2008

Original: ENGLISH

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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

Sub-Committee of Experts on the Globally  
Harmonized System of Classification  
and Labelling of Chemicals

Thirty-third session  
Geneva, 30 June-9 (a.m) July 2008  
Items 2 and 11 of the provisional agenda

Fifteenth session  
Geneva, 9 (p.m) -11 July 2008  
Item 2 (a) of the provisional agenda

**UPDATING OF THE SECOND REVISED EDITION OF THE GLOBALLY HARMONIZED  
SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS)**

Physical hazards

Substances having explosive properties

Transmitted by the expert from Germany\*

**Introduction**

1. The test procedures for the classification of substances having explosive properties are based mostly on the classification scheme for explosives that was originally worked out for transport.

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\* In accordance with the programme of work of the Sub-Committee for 2007-2008 approved by the Committee at its third session (refer to ST/SG/AC.10/C.3/10, para. 100 and ST/SG/AC.10/34, para. 14).

2. Test series 1 to 3 of these procedures are based on testing intrinsic properties (of unpackaged substances). The further test series 4 to 7 are based on testing packed substances and result in the classification for transport.

3. This classification procedure is appropriate for the transport of explosives because they are packed but it is not adequate for supply and use.

### **Sequence of test series 1 to 3 for evaluating intrinsic explosive properties**

4. Test series 3 consists of tests which require comparatively low sample amounts and which therefore – also with regard to safety – are suitable to be used as preliminary screening tests (this is also stated in the UN Manual of Tests and Criteria, subsection 10.3.3.3).

5. Test series 3 can identify and sort out unstable explosives right at the beginning.

6. Therefore, for the purposes of supply and use, it would be appropriate to put test series 3 at the beginning of the whole procedure.

### **Simplified classification for supply and use (if substances are not transported)**

7. Test series 1 to 3 are based on testing of unpackaged substances and result in information about explosive properties that are appropriate and sufficient for the purposes of supply and use.

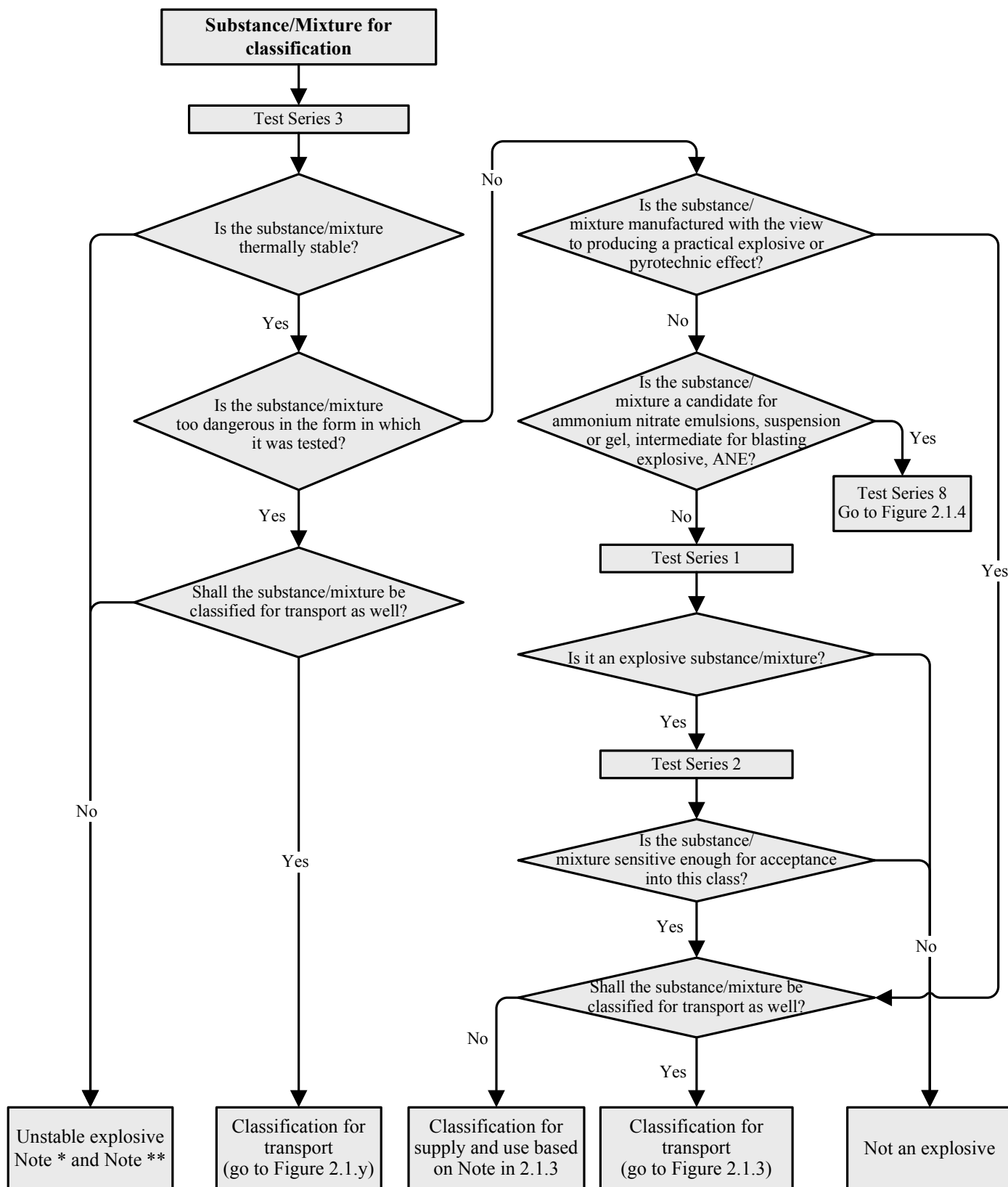
8. Therefore, this proposal introduces the option to simplify the classification procedure for explosives and substances having explosive properties which are not transported. This is achieved by dividing the classification procedure as follows:

- (a) Intrinsic properties are evaluated first and may be used for the purposes of supply and use on their own;
- (b) Properties of packed explosives are evaluated as usual if they are intended to be transported (Figure 2.1.3 remains unchanged and would have to be renumbered only).

9. If a substance has explosive properties and is not transported, the manufacturer may waive those test series using packed substances and classify according to the Note to table 2.1.2 in section 2.1.3. Therefore, the note in section 2.1.3 which originally aimed at unpacked or repacked explosives is modified in order to cover this proposal, see below in the proposal itself.

## **Proposal**

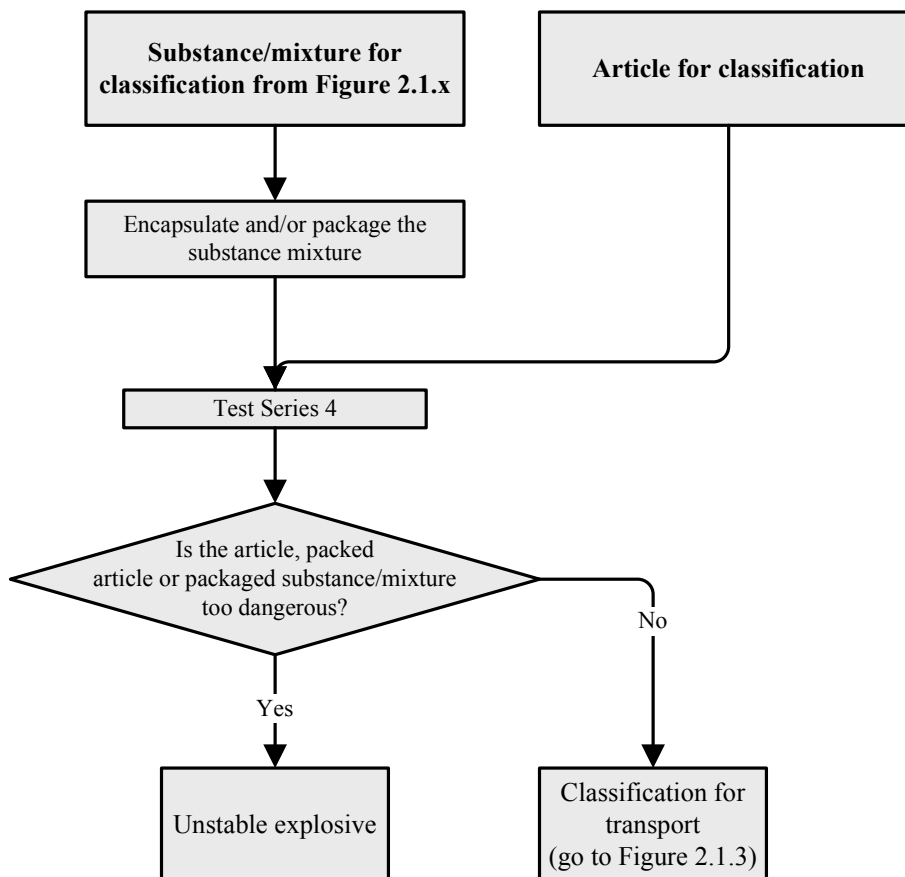
10. The proposal consists of the following elements:
  - (a) Proposal for Figure 2.1.x reproduces a classification scheme including solely those test series that require testing of unpackaged substances only (test series 1 to 3);
  - (b) Proposal for Figure 2.1.y reproduces a classification scheme with test series 4 for articles and encapsulated or packed unstable explosives;
  - (c) Proposal for Note in section 2.1.3 is adapted to also considering the simplified procedure for explosives and substances having explosive properties which are not transported.
11. The note "For classification purposes, start with Test series 2" below figure 2.1.2 of the GHS is not reproduced in this proposal because it is not necessary. It was under discussion in past meetings and supposed to be deleted. However, this is not a crucial point of this proposal.
12. This document might be considered by the Working Group on Explosives.

**Proposal for Figure 2.1.x: Procedure for classification of substances/mixtures in the class of explosives**

Note \*: Self-reactive substances and mixtures, organic peroxides and other thermally unstable substances are not covered by this classification.

Note \*\*: In order to establish appropriate conditions for handling unstable explosives, it is strongly recommended to complete test series 3 and to carry out test series 2 as well.

**Proposal for new Figure 2.1.y: Procedure for provisional acceptance of a substance, mixture or article in the class of explosives (Class 1 for transport)**



**Proposal for Note in section 2.1.3**

**Note:** Substances having explosive properties which are not transported may be classified without further testing as division 1.1.

Unpacked explosives or explosives repacked in packagings other than the original or similar packaging shall be classified as division 1.1 unless the hazard is shown to correspond to one of the hazard divisions in subsection 2.1.2.1.

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