



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 10 (a) of the provisional agenda

**Issues relating to the Globally Harmonized System
of Classification and Labelling of Chemicals: review
of Chapter 2.1**

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

Thirty-ninth session

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Item 2 (b) of the provisional agenda

**Classification criteria and related hazard communication:
review of Chapter 2.1**

Amendments to the Manual of Tests and Criteria to accommodate the new GHS Chapter 2.1 – in principle

**Transmitted by the expert from Sweden on behalf of the informal
correspondence group on the review of Chapter 2.1***

Introduction

1. In document ST/SG/AC.10/C.3/2020/20-ST/SG/AC.10/C.4/2020/5, a new Chapter 2.1 for the GHS is proposed. As a consequence of the new classification system suggested therein, Part I of the Manual of Tests and Criteria (the Manual) needs amending. The amendments are of an editorial nature, the main problem being the use of the term “unstable explosive(s)” which will be repealed as a classification and therefore needs to be replaced. There may also be some further editorial changes needed to complete the transformation.
2. The changes to the Manual have been discussed within the Informal Correspondence Group at a principal level and draft amendments have been circulated for comments. While more time is needed to arrive at the final texts, the expert from Sweden believes that there is consensus on how the amendments could best be done at the principal level. This document is therefore submitted on behalf of the ICG.

Background

3. With the classification system of the proposed new Chapter 2.1, the current classification “unstable explosive” will cease to exist. Unstable explosives (in the sense of current Chapter 2.1) are explosives that are thermally unstable or too sensitive to be assigned to a division. In the new classification system, they will be included into Category 1. As there are also other ways for explosives to be classified as Category 1, the classification “unstable

* 2020 (A/74/6 (Sect.20) and Supplementary, Subprogramme 2)

explosive” is, however, not identical to the classification Category 1. A current “unstable explosive” will always be classified as Category 1 in the new system, but the reverse is not true, i.e. an explosive classified as Category 1 is not necessarily an unstable explosive.

4. The criteria for classification of explosives according to the GHS are contained in the GHS itself, and therefore do not have to be repeated in the Manual. From the perspective of the GHS, the Manual is needed to answer the core GHS classification question “Has a division been assigned according to Part I of the Manual?”. If the answer to that question is “Yes”, the GHS also needs information on what that division is, but this is also the case in the current GHS classification system and therefore no changes are needed from that perspective.

Proposed way forward

5. In principle, therefore, in the Manual the term “unstable explosive”, which refers to a GHS classification, can be replaced by “no division assigned” or something along these lines, which is an outcome of the procedure in Part I of the Manual. That answer from the Manual is then subsequently used to answer the core question (above) in the GHS, which will direct the explosive to the GHS classification Category 1. In this way the Manual avoids interfering with, or duplicating, the GHS classification system.

6. From the perspective of transport, the answer “no division assigned” immediately leads to the conclusion that the explosive is not allowed for transport (“too dangerous for transport”). In a similar way as for the GHS, the ban on transport of explosives not assigned to a division is thus a consequence of them not being assigned to a division rather than a result in itself.

7. While further work is needed to complete the amendments to Part I of the Manual as described, a few examples are given in Annex I to this document for illustration purposes only. The aim is to produce an informal document containing the complete list of amendments to the Manual, for further discussion by the Working Group on Explosives at their meeting in parallel to the fifty-seventh session of the Sub-Committee of experts on the Transport of Dangerous Goods, and subsequent endorsement by that Sub-Committee.

Annex

Illustrations of the idea for amendments to Part I of the Manual of Tests and Criteria in order to accommodate a new GHS Chapter 2.1

Section	Current text (text to be replaced in bold strikethrough)	Draft amended text (text to be inserted in bold underline)
10.1.2	<p>The GHS class of explosives covers all sectors. Class 1 is a subset of this class and comprises explosives as presented for transport. The class of explosives also includes unstable explosives which are those explosives which are forbidden for transport. Goods of class 1 are assigned to one of the six divisions, depending on the type of hazard they present (see Chapter 2.1, paragraph 2.1.1.4 of the Model Regulations and Chapter 2.1, paragraph 2.1.2 of the GHS) and, for some regulatory purposes (e.g. transport), to one of the thirteen compatibility groups that identify the kinds of explosives that are deemed to be compatible. [...]</p>	<p>The GHS class of explosives covers all sectors. Class 1 is a subset of this class and comprises explosives as presented for transport. Goods of class 1 are assigned to one of the six divisions, depending on the type of hazard they present (see Chapter 2.1, paragraph 2.1.1.4 of the Model Regulations) and to one of the thirteen compatibility groups that identify the kinds of explosives that are deemed to be compatible. <u>The divisions are also used as a basis for classification in the GHS class of explosives (see Chapter 2.1, section 2.1.2, of the GHS). The GHS class of explosives also comprises explosives that are not assigned to a division.</u> [...]</p>
10.3.4	<p>Test series 3 is used to answer the questions "Is it thermally stable?" (box 12, Figure 10.2) and "Is it unstable in the form in which it was tested?" (box 13, Figure 10.2). This involves tests for determining the sensitiveness of the substance to mechanical stimuli (impact and friction), and to heat and flame. The following four types of test are used: [...]</p>	<p>Test series 3 is used to answer the questions "Is it thermally stable?" (box 12, Figure 10.2) and "Is it <u>too sensitive to assign a division</u> in the form in which it was tested?" (box 13, Figure 10.2). This involves tests for determining the sensitiveness of the substance to mechanical stimuli (impact and friction), and to heat and flame. The following four types of test are used: [...]</p>
13.1	<p>This test series is used to answer the questions in boxes 10 and 11 of Figure 10.2 by determining the sensitiveness of the substance to mechanical stimuli (impact and friction), to heat and to flame. The question in box 10 is answered "no" if a "+" is obtained in test type 3(c) and the substance shall be categorised as an unstable explosive; consequently, the substance is not permitted for transport. The question in box 11 is answered "yes" if a "+" is obtained in any of the test types 3(a), 3(b) or 3(d). If a "+" is obtained, the substance shall be categorised as an unstable explosive in the form in which it was tested but may be encapsulated or otherwise desensitized or packaged to reduce its sensitiveness to external stimuli.</p>	<p>This test series is used to answer the questions in boxes 10 and 11 of Figure 10.2 by determining the sensitiveness of the substance to mechanical stimuli (impact and friction), to heat and to flame. The question in box 10 is answered "no" if a "+" is obtained in test type 3(c) and the substance <u>is considered too sensitive to assign a division</u>; consequently, the substance is not permitted for transport. The question in box 11 is answered "yes" if a "+" is obtained in any of the test types 3(a), 3(b) or 3(d). If a "+" is obtained, the substance <u>is considered too sensitive to assign a division and is not permitted for transport</u> in the form in which it was tested but may be encapsulated or otherwise desensitized or packaged to reduce its sensitiveness to external stimuli.</p>