

**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 (h) of the provisional agenda

**Explosives and related matters:
Review of Chapter 2.1 of the GHS**

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

Thirty-seventh session

Geneva, 8-10 July 2019

Item 2 (b) of the provisional agenda

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

**Working Group on Explosives and the Informal Correspondence
Group on the review of GHS Chapter 2.1**

Transmitted by the expert from Sweden

1. The joint meeting of the Working Group on Explosives (EWG) and the Informal Correspondence Group (ICG) on the review of GHS Chapter 2.1 discussed the criteria of the various classifications of the new GHS classification system as presented in the Annex of document ST/SG/AC.10/C.4/2019/5 - ST/SG/AC.10/C.3/2019/32. These discussions were based on document UN/SCETDG/55/INF.19 - UN/SCEGHS/37/INF.8, with the aim of revising and improving the therein suggested criteria, and seek agreement upon them.
2. The formal part of the meeting has been reported in the EWG-report, see paragraph 8 of document UN/SCETDG/55/INF.55. The discussions were, however, continued after this (on Thursday 4 July) and the outcome of these additional discussions are presented in the annex to this document.
3. The expert from Sweden is very thankful to the EWG-experts for their hard and engaged work on this matter and is under the impression that the criteria needed for a new GHS Chapter 2.1 are now settled within this group.

Annex – Agreed criteria in the informal EWG/ICG meeting on 4 July 2019

- It was agreed that a clarification of the scope of Category 1, as drafted in section 2.1.2.2 point a) of INF.8/INF.19, is needed in an appropriate place in Chapter 2.1. It should clarify that, unless excluded from the scope of the class of explosives (or classified in Category 2), Category 1 covers:
 - a) Substances, mixtures and articles manufactured with a view of producing an explosive or pyrotechnic effect; and
 - b) Other substances and mixtures that give positive results in Test series 2 of the UN Manual.
- The draft list of exclusions from the class of explosives in 2.1.1.3 of INF.8/INF.19 was reviewed and the following exclusions were agreed (text in square brackets was agreed conceptually but needs further scrutiny):

”The following substances, mixtures and articles are excluded from the class of explosives:

- a) Ammonium nitrate based emulsions, suspensions or gels which meet the criteria of Test series 8 of the UN Manual of Tests and Criteria for classification as ANEs of Category 2 oxidizing liquids (Chapter 2.13) or Category 2 oxidizing solids (Chapter 2.14)
- b) Desensitized explosives according to the criteria of Chapter 2.17.
- c) Substances and mixtures which have not been manufactured with the view to producing an explosive or pyrotechnic effect and which according to UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria:
 - (i) are deemed not to have explosive properties on basis of the screening procedures in Appendix 6; or
 - (ii) do not have explosive properties according to Test Series 2 testing; or
 - (iii) are excluded from assignment within Class 1 of the UN Model Regulations based on results in Test Series 6*; or
 - (iv) are organic peroxides according to Chapter 2.15 or self-reactive substances or mixtures according to Chapter 2.8.
 - (v) [Substances in the research and development phase for which not enough material exists to perform Test Series 2 may be regarded as Self-reactive substances and mixtures Type C, provided that:
 - The decomposition energy of the substance is less than 2000 J/g; and
 - The result in Test 3(a) and Test 3(b) is negative; and
 - The result in Test 2(b) is “no explosion” at an orifice diameter of 6 mm; and
 - The expansion of the lead block in Test F.3 is less than 100 ml per 10 gram substance.]
- d) Substances, mixtures and articles that are excluded from Class 1 according to the UN Recommendations on the Transport of Dangerous Goods, Model Regulations**.

** Note: It is acknowledged that this exclusion may depend on a particular configuration. See also [insert reference to current Note 2 in Section 2.1.3 of current Chapter 2.1, which may need some revision.]*

*** Note: It is acknowledged that this exclusion may depend on a particular configuration.”*

- It was agreed that text addressing the potentially changing classification over the life-cycle of an explosive, as drafted in section 2.1.2.2 point b) of INF.8/INF.19, would be helpful and should preferably be included in the main text of the new Chapter 2.1. A suitable place could be in section 2.1 under “Additional considerations” and a rough draft of such text was shown on screen.
- It was agreed that the divisions need to be included in a new Chapter 2.1, as they are part of the GHS classification scheme. The description of the divisions should be as identical to those of the Model Regulations as possible, taking into account that the latter sometimes use transport-specific language (such as “load”) that needs to be altered in the GHS. The description of the divisions as in section 2.1.2.3.1 of INF.8/INF.19 were agreed, including the separate description of Division 1.4 Compatibility Group S. Draft introductory text to explain the divisions in the context of GHS was shown on screen:

“The divisions were originally designed to accommodate the transportation of explosives and are used in Class 1 of the UN Model Regulations. Assignment to a division is based on extensive testing where the explosive is tested in a particular configuration, normally as configured for transport, and it is therefore tied to that particular configuration. The division is the relevant level of classification whenever the explosive is in the configuration to which that division was assigned, e.g. when stored.”

- It was agreed that descriptions of the sub-categories as drafted in section 2.1.4 of INF.8/INF.19 would be helpful to include in the guidance section of a new Chapter 2.1, and that decision logic in form of a flowchart would probably be good to include as well.
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