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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****Sixty-second session**

Geneva, 3-7 July 2023

Item 2 (h) of the provisional agenda

**Explosives and related matters:****Miscellaneous****Sub-Committee of Experts on the Globally Harmonized  
System of Classification and Labelling of Chemicals****Forty-fourth session**

Geneva, 10-12 July 2023

Item 2 (a) of the provisional agenda

**Work of the Sub-Committee of Experts on the Transport  
of Dangerous Goods on matters of interest to the Sub-  
Committee of Experts on the Globally Harmonized System  
of Classification and Labelling of Chemicals****Amendment of definition “explosive or pyrotechnic effect”****Transmitted by the expert from Sweden\*****Introduction**

1. At the fifty-fifth session of the Sub-Committee of Experts on the Transport of Dangerous Goods (SCETDG), the Working Group on Explosives (EWG) decided to entrust the review of matters related to the definition of Class 1 to an intersessional correspondence group (ICG) which should report back to the EWG (see paragraph 10 in informal document INF.55 (SCETDG, fifty-fifth session)).

2. The ICG reported back to the EWG, and the proposals from the ICG were discussed by the EWG and by the SCETDG during the sixtieth session (see informal document INF.12 (60th session), the report from the EWG to the SCETDG, informal document INF.44 (sixtieth session) and paragraph 27 in the report of the session (ST/SG/AC.10/C.3/120)).

3. The outcome of this work was a working document to the sixty-first session of the SCETDG and the forty-third session of Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (SCEGHS), with a number of proposals (see ST/SG/AC.10/C.3/2022/47–ST/SG/AC.10/C.4/2022/8). One of the proposals was to introduce a definition of the term “explosive or pyrotechnic effect” both in the UN Model Regulations (UNMR) and in the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), namely:

- In the UNMR, paragraph 2.1.1.3 (e) of Chapter 2.1

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\* A/77/6 (Sect. 20), table 20.6



“(e) *Explosive or pyrotechnic effect* in the context of 2.1.1.1 (c) means an effect produced by self-sustaining exothermic chemical reactions including shock, blast, fragmentation, projection, heat, light, sound, gas and smoke.”, and

- In the GHS, paragraph 2.1.1.1 of Chapter 2.1

“*Explosive or pyrotechnic effect* in the context of 2.1.1.2.1 c) means an effect produced by self-sustaining exothermic chemical reactions including shock, blast, fragmentation, projection, heat, light, sound, gas and smoke.”.

4. These proposals were adopted by the SCETDG at its sixty-first session and by the SCEGHS at its forty-third session (see paragraph 18 in ST/SG/AC.10/C.3/122<sup>1</sup>, and paragraph 9 in ST/SG/AC.10/C.4/86<sup>2</sup>).
5. However, as adopted, the definition of “explosive or pyrotechnic effect” will only apply to the specific contexts of paragraphs 2.1.1.1 (c) of the UNMR and 2.1.1.2.1 (c) of the GHS, respectively. This implies that the definition is not applicable to the term “explosive or pyrotechnic effect” elsewhere in the UNMR and the GHS. There is a drawback of such a limited definition, as the same term might be understood differently in other contexts in the texts of the UNMR and the GHS.
6. An overview of the UNMR and the GHS has shown that the term “explosive or pyrotechnic effect” is also used in several other locations in these documents, namely:
  - 2.0.4.3.1 (a) of the UNMR
  - 2.1.3.3.1 of the UNMR
  - 2.1.1.2.2 (c) and note (a) to 2.1.1.2.2 (c) of the GHS
  - Table 2.1.1 in 2.1.2.1 of the GHS
  - Decision logic 2.1 (a) in 2.1.4.1 of the GHS, and
  - 2.17.2.1 (a) of the GHS
7. Analysis of the usage of the term “explosive or pyrotechnic effect” in the contexts of all above-mentioned locations shows that the definition is applicable to all these locations in both UNMR and GHS, according to the expert from Sweden.
8. An overview of the usage of the term “explosive or pyrotechnic effect” has also been carried out in the UN Manual of Tests and Criteria (MTC). It can be concluded that this term has been used nearly thirty times in the MTC. The definition of the term “explosive or pyrotechnic effect” would be applicable also to all these occurrences, according to the expert from Sweden.
9. The conclusion is that it is not necessary to limit the application of definition of the term “explosive or pyrotechnic effect” to a specific context, as it is applicable to all occurrences of the term in the UNMR and the GHS as well as the MTC.

## Proposals

10. The expert from Sweden proposes that the EWG looks into this issue and considers whether the definition of the term “explosive or pyrotechnic effect” should only be applied in a specific context or if it can be applied throughout the UNMR and the GHS as well as the MTC.
11. If the EWG concludes that it is not necessary to limit the application of the definition to a certain context, the following amendments should be considered by the Sub-committees (bold strike-through text indicates text to be removed).

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<sup>1</sup> <https://unece.org/transport/documents/2022/12/reports/report-sub-committee-experts-transport-dangerous-goods-its>

<sup>2</sup> <https://unece.org/transport/documents/2022/12/reports/report-sub-committee-experts-globally-harmonized-system>

**Proposal 1A**

In the UNMR, amend the definition of “explosive or pyrotechnic effect” in Chapter 2.1 subparagraph 2.1.1.3 (e), as follows:

“(e) *Explosive or pyrotechnic effect* ~~in the context of 2.1.1.1 (e)~~ means an effect produced by self-sustaining exothermic chemical reactions including shock, blast, fragmentation, projection, heat, light, sound, gas and smoke.”.

**Proposal 1B**

Consequently, amend also the definition of “explosive or pyrotechnic effect” in GHS Chapter 2.1, paragraph 2.1.1.1 to read as follows:

“*Explosive or pyrotechnic effect* ~~in the context of 2.1.1.2.1 e)~~ means an effect produced by self-sustaining exothermic chemical reactions including shock, blast, fragmentation, projection, heat, light, sound, gas and smoke.”.

12. To facilitate the application of the term in other parts of the UNMR and the GHS, it could additionally be considered to insert notes referring to the definition in chapter 2.1 of the UNMR and GHS, as follows:

**Proposal 2A**

Add a note in Chapter 2.0, paragraph 2.0.4.3.1 of the UNMR:

“*NOTE: See 2.1.1.3 (e) in chapter 2.1 for the definition of explosive or pyrotechnic effect.*”

**Proposal 2B**

Add a note in Chapter 2.17, paragraph 2.17.2.1 of the GHS:

“*NOTE 3: See 2.1.1.1 in chapter 2.1 for the definition of explosive or pyrotechnic effect.*”

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