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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****Fifty-fourth session**

Geneva, 26 November–4 December 2018

Item 7 (d) of the provisional agenda

**Issues relating to the Globally Harmonized System  
of Classification and Labelling of Chemicals:  
use of the Manual of Tests and Criteria in the  
context of the GHS****Sub-Committee of Experts on the Globally Harmonized  
System of Classification and Labelling of Chemicals****Thirty-sixth session**

Geneva, 5–7 December 2018

Item 3 (a) of the provisional agenda

**Classification criteria and related hazard communication:  
Work of the Sub-Committee of Experts on the Transport  
of Dangerous Goods (TDG) on matters of interest to the  
GHS Sub-Committee****Use of the Manual of Tests and Criteria in the context of  
GHS****Transmitted by the Chairman of the Working Group on Explosives of  
the Sub-Committee of Experts on the Transport of Dangerous Goods  
(TDG Sub-Committee) on behalf of the Working Group\***

1. This document contains the proposed list of amendments to Part II, Section 28 of the sixth revised edition of the Manual of Tests and Criteria, including Amendment 1, to take account of the determination of the self-accelerated polymerization temperature (SAPT), for consideration by both sub-committees.
2. During the work, that was jointly done with an expert from CEFIC, it was noted that definition of SAPT in the Model regulations was not correct and that the words “self-accelerating” needs to be inserted. It was also noted that a definition of self-accelerated decomposition temperature (SADT) is currently not included in the Model regulations. It is therefore proposed to include such a definition.
3. For practical reasons, the text of Test Series H with the proposed changes in visible mode is circulated separately, in English only, in informal document INF.6(TDG)-INF.5(GHS).

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\* In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

## SECTION 28

28.1 In the first sentence insert “and the self-accelerating polymerization temperature (SAPT)” after “(SADT)”.

Insert a new third sentence reading “The SAPT is defined as the lowest temperature at which self-accelerating polymerization may occur with a substance in the packaging.”

Amend the start of the, now, fourth sentence to read “The SADT and SAPT are measures of the...” and replace “decomposition” by “reaction”.

28.2.1 At the end of the paragraph insert “or a polymerizing substance”.

28.2.2 In the last sentence insert “or SAPT” after “SADT”

28.2.3 Amend to read “When temperature control is necessary (see Table 28.2) the control and emergency temperatures should be derived from the SADT or SAPT using Table 28.3.”

Renumber table 28.2 to 28.3, replace “SADT” by “SADT/SAPT” in the table and the note to the table (10 times), in the last row replace “< 50 °C” by “≤ 45 °C”

Before the renumbered table 28,3 insert a new table 28.2

**“Table 28.2: CRITERIA FOR TEMPERATURE CONTROL**

| <b>Type of substance</b>   | <b>Criterion for temperature control</b> |
|--|--|
| Self-reactive substance  | SADT ≤ 55 °C                             |
| Organic peroxide Type B and C  | SADT ≤ 50 °C                             |
| Organic peroxide Type D showing medium effect when heated under confinement <sup>1</sup>     | SADT ≤ 50 °C                             |
| Organic peroxides Type D showing low or no effect when heated under confinement <sup>1</sup> | SADT ≤ 45 °C                             |
| Organic peroxides Type E and F   | SADT ≤ 45 °C                             |
| Polymerizing substance in packaging or IBC   | SAPT ≤ 50 °C                             |
| Polymerizing substance in portable tank  | SAPT ≤ 45 °C                             |

<sup>1</sup> *As determined by test series E as prescribed in this Manual of Tests and Criteria, Part II*”

28.2.4 Delete “of Division 4.1”

28.2.5 Renumber this paragraph to 28.2.6 and insert a new paragraph 28.2.5 reading “If a substance is being tested to determine whether it is a polymerizing substance, a test of series H, or a suitable alternative test, should be performed to determine if its SAPT would be less than or equal to 75 °C in its packaging, IBC or portable tank.”

28.3.1 Amend the beginning of the sentence to read “For organic peroxides and self-reactive substances the preliminary...”

28.3.4 Replace “SADT” by “SADT or SAPT”.

28.3.5 Replace “SADT” by “SADT or SAPT”.

28.3.6 Replace “SADT” by “SADT or SAPT”.

28.4.1.1 In the first sentence correct “auto-accelerative” to “self-accelerating”. In the second sentence replace “220 litres” by “225 litres”. In the third sentence insert “or polymerization” between “decomposition” and “reaction”.

- 28.4.1.2.5 In the last sentence replace “SADT” by “SADT or SAPT”.
- 28.4.1.3.4 In the second sentence replace “self-accelerating decomposition temperature (SADT)” by “SADT or SAPT”. In the third sentence replace “SADT” by “SADT or SAPT” (twice). Insert a new last sentence reading “If the substance is being tested to determine if it meets the SAPT criterion for a polymerizing substance, perform sufficient tests to determine if the SAPT in the packaging as used is 75 °C or less.”
- 28.4.1.4.1 Replace “SADT” by “SADT or SAPT” (twice).
- 28.4.1.5 In the table heading replace “SADT” by “SADT/SAPT”
- 28.4.2.1.1 In the second sentence replace “SADT” by “SADT or SAPT”.
- 28.4.2.2.2 In the last sentence replace “SADT” by “SADT or SAPT”.
- 28.4.2.4.6 In the last sentence replace “SADT” by “SADT or SAPT”.
- 28.4.2.5 In the table heading replace “SADT” by “SADT/SAPT”.
- Figure 28.4.2.2, letter “D” sentence replace “Self-accelerating decomposition temperature (SADT)” by “SADT or SAPT” and insert “or SAPT” at the end of the title of the figure.
- 28.4.3.1.1 In the second sentence replace “SADT” by “SADT or SAPT”.
- 28.4.3.2.1 In the last sentence replace “SADT” by “SADT or SAPT”.
- 28.4.3.4.3 In the last sentence replace “SADT” by “SADT or SAPT”.
- 28.4.3.5 In the table heading replace “SADT” by “SADT/SAPT”.
- Figure 28.4.3.2, letter “D” sentence replace “Self-accelerating decomposition temperature (SADT)” by “SADT or SAPT” and insert “or SAPT” at the end of the title of the figure.
- 28.4.4.1.1 In the last sentence replace “SADT” by “SADT or SAPT”.
- 28.4.4.3.4 In the second sentence replace “SADT” by “SADT or SAPT”. In the third sentence replace “SADT” by “SADT or SAPT” (twice). Insert a new last sentence reading “If the substance is being tested to determine if it meets the SAPT criterion for a polymerizing substance, perform sufficient tests to determine if the SAPT in the packaging as used is 75 °C or less.”
- 28.4.4.4.1 Replace “SADT” by “SADT or SAPT” (twice)
- 28.4.4.5 In the table heading replace “SADT” by “SADT/SAPT”.

## **Amendments to the Model Regulations**

- 1.2.1 In the definition of “Self-accelerating polymerization temperature (SAPT)” in the first sentence insert “self-accelerating” between “which” and “polymerization”.

It was noted that the definition of SADT was not included in the Model Regulations. It is therefore proposed to insert a new definition before the one for SAPT: “*Self-accelerating decomposition temperature (SADT)* means the lowest temperature at which self-accelerating decomposition may occur in a substance in the packaging, IBC or portable tank as offered for transport. The SADT shall be determined in accordance with the test procedures given in Part II, Section 28 of the Manual of Tests and Criteria.”