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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 Globally Harmonized  
System of Classification and Labelling of Chemicals****Thirty-seventh session**

Geneva, 8-10 July 2019

Item 3 (b) of the provisional agenda

**Hazard communication:****improvement of annexes 1 to 3 and further  
rationalization of precautionary statements****Proposed changes to Annex 1****Transmitted by the expert from the United Kingdom on behalf of the  
informal working group on improving annexes 1, 2 and 3 of the GHS\*****Background**

1. In line with its mandate for the 2019-2020 biennium the informal working group has taken forward work under its focus area (a): “to develop proposals to rationalise and improve the comprehensibility of hazard and precautionary statements for users, while taking into account usability for labelling practitioners.”
2. This document presents the outcome of work on item 6 in the group’s workplan (informal document INF.25, thirty-sixth session) where the issue is: “review the GHS and TDG pictograms and the use of notes in Annex 1 to ensure consistent and helpful presentation across the hazard classes and categories”.

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\* In accordance with the programme of work of the Sub-Committee for 2019-2020 approved by the Committee at its ninth session (see ST/SG/AC.10/C.3/108, paragraph 141 and ST/SG/AC.10/46, paragraph 14).

## Discussion

3. The purpose of this work item was to review the pictograms and notes in Annex 1 to remove inconsistencies, provide greater clarity and improve the readability and presentation of the tables in Annex 1.

4. The informal working group identified a number of errors and inconsistencies in the tables and notes in Annex 1, including:

(a) Table A1.1 (Explosives):

- i. Table A1.1 contains Model Regulations' Divisions that currently do not appear in any of the other tables in Annex 1. However, for consistency and clarity it could be argued that Model Regulations classification, where applicable, should also be included in all the tables in Annex 1. In addition, GHS covers consumers, workplace and transport and since the Model Regulations pictograms are already provided in the tables, it would also be consistent to provide the relevant Model Regulations classification in the tables of Annex 1;
- ii. The signal word for hazard categories "unstable explosives" and "Divisions 1.1 to 1.3" are the same and the individual signal word entries have been merged into one box containing the word "Danger". This is inconsistent with the format of the other tables in Annex 1 which repeat identical text or pictogram entries in adjacent boxes. However, it illustrates how the information in the tables could be provided in a clearer, simpler and less cluttered format.
- iii. The second sentence in the note beneath Table A1.1 starting with "The pictogram for Divisions..." provides unnecessary information that the informal working group considered should be deleted on the basis that the table notes do not normally referred to other tables where the same or similar pictograms are used.

(b) The notes beneath several of the tables (see Tables A1.2, A1.3, A1.5, A1.6, A1.12) that refer to symbol, number, border and background colour of the Model Regulations' pictograms are inconsistently worded and raise questions regarding:

- i. What the alternative pictograms look like, as they are not clearly illustrated;
- ii. Why notes are not provided beneath all tables to indicate whether or not alternative pictograms are available for other hazard classes/categories.

(c) Several of the tables contain incorrectly displayed Model Regulations' pictogram entries:

- i. **Table A1.4 (Oxidising gases)** – Under the Model Regulations these substances are classified as non-flammable gases (Division 2.2) due to their primary hazard, with a subsidiary hazard as an oxidizing substance (Division 5.1). The table entry incorrectly displays only the Division 5.1 (flame over circle; yellow background) Model Regulations' pictogram and should also display the Division 2.2 non-flammable gases (gas cylinder; green background) pictogram.
- ii. **Table A1.8 (Self-reactive substances and mixtures) and Table A1.15 (Organic peroxides)** – The Model Regulations' pictogram table entries for "Type B" self-reactive substances and mixtures or "Type B"

organic peroxides incorrectly indicate that two pictograms apply, when the orange (exploding bomb) Model Regulations' pictogram assigned to Divisions 1.1, 1.2 and 1.3 is only required for "Type B" substances that have an explosive subsidiary risk.

- iii. **Table A1.17 (Desensitised explosives)** – Although these substances are classified differently under the GHS than under the Model Regulations, the table entry does not display the relevant Model Regulations pictograms. For clarity and consistency reasons the table entry should display both a Class 3 (for liquid desensitised explosives) and a Division 4.1 (for solid desensitised explosives) Model Regulations pictograms;
- iv. **Tables A1.29 (a) (Hazardous to the aquatic environment, short term (acute)) and (b) (Hazardous to the aquatic environment, long term (chronic))** – These tables do not display the Class 9 Model Regulations pictogram which applies to substances that are hazardous to the aquatic environment and should be provided in the table entry, in addition to the environmentally hazardous substance Model Regulations pictogram.

(d) Tables A1.8 (self-reactive substances and mixtures) and A1.15 (organic peroxides) - For accuracy and consistency with the unstable explosives Model Regulations' pictogram entry in Table A1.1, for "Type A" self-reactive substances and mixtures and "Type A" organic peroxides entries, the text under Model Regulations pictogram column should read "Transport not allowed" rather than "Transport may not be allowed" as these substances are not allowed to be transported.

(e) Table A1.20 (Serious eye damage/eye irritation) – In accordance with paragraph 3.3.2.1.2.1, Table A1.20 should have a note inserted beneath the table indicating that the hazard subcategories 2A and 2B may be applied where data are sufficient and where required by a competent authority.

5. The advantages of the proposed changes to Annex 1 include:

- (a) Improved clarity, consistency and readability of the tables, through the:
  - i. Inclusion of Model Regulations' class or divisions, in addition to Model Regulations pictograms, in the tables enables greater clarity and comparison between the equivalent classification systems of GHS and Model Regulations.
  - ii. Merger (where this aids greater clarity) of identical text or pictograms in adjacent table entries, provides a less cluttered presentation of information in the tables and enables easier access to relevant classification and labelling information for the labelling practitioner;
  - iii. Introduction of new notes at the beginning of Annex 1 that provide:
    - Clear reasoning behind the inclusion of Model Regulations' classification and labelling in the tables of Annex 1, whilst also directing the reader to the Model Regulations for definitive classification and labelling under those regulations (Note 2).
    - Consistent information on the display of pictograms in the tables (Note 3).
  - iv. Inclusion in the tables of alternative Model Regulations' pictograms, where these are available, together with the use of the word 'or' in

- between these pictograms to clearly indicate that either alternative is available to be used (see Tables A1.2, A1.3, A1.4, A1.5, A1.6, A1.12, A1.15, A1.17 in informal document INF.3).
- v. Inclusion of the word “*and*” in between two pictograms displayed in a table entry for a given hazard class or category to clearly indicate that both pictograms are required to be used (see Table A1.3, A1.4, A1.8, A1.15, A1.29(a), A1.29(b) in informal document INF.3).
  - vi. Inclusion of the words “*and if applicable*” between the two pictograms displayed for “Type B” self-reactive substances and mixtures or “Type B” organic peroxides, with additional information provided in a note beneath table, to clearly indicate that if there is an explosive subsidiary risk (see Tables A1.8 and A1.15 in informal document INF.3), then the second pictogram (orange “exploding bomb” Model Regulations’ pictogram) is also be required to be used.
  - vii. Deletion of inconsistently worded notes beneath tables that relate to alternative pictograms (see Tables A1.2, A1.3, A1.5, A1.6, A1.12 in informal document INF.3), with a more detailed note (Note 3) on the display of pictograms, including alternatives, provided at the beginning viii.
  - viii. Redrafting of other notes beneath several tables (see Tables A1.1, A1.5, A1.8, A1.15, A1.17, A1.18, A1.19, A1.21, A1.22, A1.29(a), A1.29(b) in informal document INF.3) and inclusion of new notes (see Tables A1.2, A1.4, A1.6, A1.20 in informal document INF.3) that provides greater clarity, accuracy and consistency of information presented in Annex 1.
  - ix. Consistently used terminology in the tables and notes, including:
    - Where there is no Model Regulations’ classification or pictogram for a particular hazard class or category, the term ‘*Not applicable*’ is used in the relevant table entries under the respective columns to help ensure consistent terminology is used in the tables (see Tables A1.2, A1.6, A1.8, A1.15, A1.18, A1.19, A1.20, A1.21, A1.22, A1.23, A1.24, A1.25, A1.26, A1.27, A1.28, A1.29(a), A1.29(b), A1.30 in informal document INF.3).
    - As “Type A” Self-reactive substances and mixtures and “Type A” Organic peroxides are not allowed to be transported, the term “*Transport not allowed*” used in the respective entries under the Model Regulations’ classification and pictogram columns enables improved accuracy and consistency with the term used for unstable explosives (see Tables A1.1, A1.8 and A1.15 in informal document INF.3).
- (b) Improved clarity and accuracy of labelling information through the inclusion of additional:
- i. Model Regulations’ pictograms in specific tables, as follows:
    - **Table A1.4 (oxidising gases)** – Insertion of the Division 2.2 (non-flammable gases) pictograms, both alternatives.

- **Table A1.17 (desensitized explosives)** – Insertion of the Class 3 (for liquid desensitized explosives) and Division 4.1 (for solid desensitized explosives) pictograms.
  - **Table A1.18 (acute toxicity)** – Insertion of the Division 2.3 (for toxic gases) pictogram.
  - **Table A1.29 (a) (Hazardous to the aquatic environment, short term (acute)) and Table A1.29 (b) (Hazardous to the aquatic environment, long term (chronic))** – Insertion of the Class 9 pictogram.
- ii. Text in the entries under the “UN Model Regulations class or division” and “UN Model Regulations pictogram” columns for Tables A1.17 (desensitized explosives) and A1.18 (Acute toxicity), with further explanation provided in notes beneath these tables, to aid clarity regarding the classification and labelling of these substances under the Model Regulations. Although this approach is slightly inconsistent with the proposed presentation in the other tables in Annex 1, the informal working group considered that it provided the most appropriate and concise way of conveying the necessary information to labelling practitioners for these hazard classes.

## Proposal

6. Informal document INF.3 sets out the proposed changes to Annex 1 in full. New text is shown in red. Deleted text is shown in ~~strike through~~. However, because it is difficult to clearly display the changes between existing adjacent table entries and those that are proposed to be merged, to assist readability only the proposed merged table entries are provided in INF.3. For the existing table entries please refer to Annex 1 in the Eighth Revised edition of the GHS.

## Action

7. The Sub-Committee is invited to agree the proposed changes to Annex 1 as set out in informal document INF.3.

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