



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-fourth session

Geneva, 24 June-3 July 2024

Item 10 (b) of the provisional agenda

Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals:

Simultaneous classification in physical hazards and
possible combination of hazards

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

Forty-sixth session

Geneva, 3-5 July 2024

Item 2 (b) of the provisional agenda

Work on the Globally Harmonized System of Classification and Labelling of Chemicals:

Simultaneous classification in physical hazards and
precedence of hazards

Proposal for clarifications on the combinations of aerosols and chemicals under pressure with other hazard classes in the Globally Harmonized System of Classification and Labelling of Chemicals

Transmitted by the expert from Germany on behalf of the informal
working group on combinations of physical hazards*

I. Introduction

1. This document is the follow-up to informal document INF.7- INF.5 considered by the Sub-Committee of Experts on the transport of Dangerous Goods (TDG Sub-Committee) and the Sub-Committee of Experts on the Globally Harmonized System (GHS Sub-Committee) at their last 2023 December sessions.¹ The proposal was welcomed and both sub-committees preferred option 2 for chemicals under pressure and for aerosols, with the amendment for the latter as presented in INF.17 (TDG Sub-Committee, 63rd session)- INF.7 (GHS Sub-Committee, 45th session).²

2. Based on the feedback received by the sub-committees and further online meetings of the informal working group, it is proposed to amend the section 2.3.2 for chemicals under pressure and 2.3.1 for aerosols in chapter 2.3 of the GHS, as outlined in section II of this document.

* A/78/6 (Sect. 20), table 20.5

¹ For the justification and explanations for the proposed amendments see paragraphs 5 to 7, 9 and 11 to 12 of informal document INF.5 (GHS Sub-Committee, 45th session) - INF.7 (TDG Sub-Committee, 63rd session).

² See paragraphs 86 and 87 of the report of the TDG Sub-Committee (ST/SG/AC.10/C.3/126) and paragraphs 13 to 15 of the report of the GHS Sub-Committee (ST/SG/AC.10/C.4/90).



3. In addition, further amendments that should have been consequential to the introduction of the new hazard class chemicals under pressure were presented in informal document INF.7 (TDG Sub-Committee, 63rd session) - INF.5 (GHS Sub-Committee, 45th session). These are also formally proposed in this document, see section III.

4. The proposed amendments as outlined in section II are shown in a version tracking the changes in the accompanying informal document INF.4 (TDG Sub-Committee) - INF.3 (GHS Sub-Committee) for this session.

II. Proposals

A. Chemicals under pressure

Option 1 for chemicals under pressure

5. Replace section 2.3.2.1 by the following:

“2.3.2.1 Definition and general considerations

2.3.2.1.1 *Chemicals under pressure* are liquids or solids (e.g. pastes or powders), pressurized with a gas at a pressure of 200 kPa (gauge) or more at 20 °C in pressure receptacles other than aerosol dispensers and which are not classified as gases under pressure.

NOTE: *Chemicals under pressure typically contain 50 % or more by mass of liquids or solids whereas mixtures containing more than 50 % gases are typically considered as gases under pressure.*

2.3.2.1.2 Chemicals under pressure do not fall additionally within the scope of section 2.3.1 (aerosols), chapters 2.2 (flammable gases), 2.5 (gases under pressure), 2.6 (flammable liquids) and 2.7 (flammable solids).

NOTE: *Depending on their contents, chemicals under pressure may fall within the scope of other hazard classes.”*

6. Replace the notes in section 2.3.2.2 by the following:

Replace Note 1 by the following:

“NOTE: *Some sectors, e.g. transport, may have specific provisions regarding the applicability of additional hazard classes differing from those in 2.3.2.1.2 and the related Note. For the transport of chemicals under pressure, see special provision 362 of the Model Regulations.”*

Delete note 2.

Option 2 for chemicals under pressure

7. According to option 1, the note in 2.3.2.2 on the applicable transport provisions for chemicals under pressure is kept under the table in 2.3.2.2 “Classification criteria”. However, it might also be moved to 2.3.2.1.2. The following arguments should be considered:

(a) The note as proposed in paragraph 6 above intends to inform about transport and for that purpose refers to special provision 362 for chemicals under pressure. This special provision is broader in scope and gives information not only on combinations but on the classification of chemicals under pressure in general. Therefore, it relates also to criteria and might belong below table 2.3.3 as presented in option 1.

(b) Another option is to move this note up to 2.3.2.1.2 as well. According to its first sentence, it intends specifically to inform about the different approach regarding combinations for transport (and maybe other sectors) and not on classification criteria for chemicals under pressure in general. Moreover, it then would be directly following the text it is referring to (and to which the words “differing from” are relating to).

8. Replace section 2.3.2.1 by the following:

“2.3.2.1 Definition and general considerations

2.3.2.1.1 *Chemicals under pressure* are liquids or solids (e.g. pastes or powders), pressurized with a gas at a pressure of 200 kPa (gauge) or more at 20 °C in pressure receptacles other than aerosol dispensers and which are not classified as gases under pressure.

NOTE: *Chemicals under pressure typically contain 50 % or more by mass of liquids or solids whereas mixtures containing more than 50 % gases are typically considered as gases under pressure.*

2.3.2.1.2 Chemicals under pressure do not fall additionally within the scope of section 2.3.1 (aerosols), chapters 2.2 (flammable gases), 2.5 (gases under pressure), 2.6 (flammable liquids) and 2.7 (flammable solids).

NOTE 1: *Depending on their contents, chemicals under pressure may fall within the scope of other hazard classes.*

NOTE 2: *Some sectors, e.g. transport, may have other specific provisions regarding the applicability of additional hazard classes. For the transport of chemicals under pressure, see special provision 362 of the Model Regulations.”*

9. Delete the notes in paragraph 2.3.2.2.2.

B. Aerosols

Option 1 for aerosols

10. Replace section 2.3.1.1 by the following:

“2.3.1.1 Definition and general considerations

2.3.1.1.1 *Aerosols, this means aerosol dispensers*, are any non-refillable receptacles made of metal, glass or plastics and containing a gas compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state.

2.3.1.1.2 Aerosols do not fall additionally within the scope of section 2.3.2 (chemicals under pressure), chapters 2.2 (flammable gases), 2.5 (gases under pressure), 2.6 (flammable liquids) and 2.7 (flammable solids).

NOTE: *Depending on their contents, aerosols may fall within the scope of other hazard classes.”*

11. Replace the notes in section 2.3.1.2.1 by the following:

Rename Note 2 to become Note 1 (please note that the text of this note might be amended based on a proposal by the European Aerosols Federation (FEA)).

Rename Note 1 to become Note 2 with the following text:

“NOTE 2: *Some sectors, e.g. transport, may have specific provisions regarding the applicability of additional hazard classes differing from those given in 2.3.1.1.2 and the related note. For the transport of aerosols, see special provision 63 of the Model Regulations.”*

Delete note 3.

Option 2 for aerosols

12. According to option 1, note 2 on the applicable transport provisions for aerosols is kept under the table in 2.3.1.2 “Classification criteria”. However, it might also be moved to 2.3.1.1.2. The following arguments should be considered:

(a) Note 2 as proposed in paragraph 11 above intends to inform about transport and for that purpose refers to special provision 63. This special provision is broader in scope and gives information not only on combinations but on the classification of aerosols in general. Therefore, it relates also to criteria and might belong below table 2.3.1 as presented in option 1.

(b) Another option is to move this note up to 2.3.1.1.2 as well. According to its first sentence, it intends specifically to inform about the different approach regarding combinations for transport (and maybe other sectors) and not on classification criteria for aerosols in general. Moreover, it then would be directly following the text it is referring to (and to which the words “differing from” are relating to).

13. Replace section 2.3.1.1 by the following:

“2.3.1.1 Definition and general considerations

2.3.1.1.1 *Aerosols, this means aerosol dispensers, are any non-refillable receptacles made of metal, glass or plastics and containing a gas compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state.*

2.3.1.1.2 *Aerosols do not fall additionally within the scope of section 2.3.2 (chemicals under pressure), chapters 2.2 (flammable gases), 2.5 (gases under pressure), 2.6 (flammable liquids) and 2.7 (flammable solids).*

NOTE 1: Depending on their contents, aerosols may fall within the scope of other hazard classes.

NOTE 2: Some sectors, e.g. transport, may have other specific provisions regarding the applicability of additional hazard classes. For the transport of aerosols, see special provision 63 of the Model Regulations.”

14. Replace the notes in section 2.3.1.2.1 by the following:

Rename note 2 to become note (please note that the text of this note might be amended based on a proposal by FEA).

Delete the other notes.

III. Further amendments

15. In the course of the introduction of the new hazard class for chemicals under pressure, the note below table 2.5.1 (chapter 2.5) was amended to include the exclusion relating to chemicals under pressure. However, the equivalent other notes were not amended to reflect the according exclusions for chemicals under pressure. For consistency, we propose to amend these other existing notes as follows (additions are underlined):

(a) Amend note 2 below table 2.2.1 in chapter 2.2 as follows:

“NOTE 2: Aerosols and chemicals under pressure should not be classified as flammable gases. See chapter 2.3.”

(b) Amend Note 4 below table 2.6.1 in chapter 2.6 as follows:

“NOTE 4: Aerosols and chemicals under pressure should not be classified as flammable liquids. See chapter 2.3.”

(c) Amend Note 2 below table 2.7.1 in chapter 2.7 as follows:

“NOTE 2: Aerosols and chemicals under pressure should not be classified as flammable solids. See chapter 2.3.”

IV. Request to the sub-committees

16. The TDG and GHS sub-committees are invited to consider the proposals for chemicals under pressure in paragraphs 5 and 6 as well as option 2 in paragraphs 8 and 9. The proposals for aerosols are given in paragraphs 10 and 11 with an equivalent option 2 in paragraphs 13 and 14. Moreover, we seek the views of the sub-committees on the amendments as proposed in paragraph 15.

17. Additionally, we would like to point out that the above proposals do not include amendments to the transport regulations but that we rather seek the advice of the TDG Sub-Committee as the focal point for physical hazards.
