



**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**

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**Work on the Globally Harmonized System (GHS):
improvement of annexes 1 to 3 and further
rationalization of precautionary statements**

**Combination statement amendments to sections 1, 2 and 3 of
Annex 3****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***

1. In line with its mandate for the 2021-2022 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 under item 2 in the group’s workplan (informal document INF.21, thirty-ninth session) where the issue was to review the tables of Annex 3 to identify inconsistencies and errors in the combination statements and to consider where other potential improvements that could be made.
3. During the review, the group consider the value of presenting combined hazard and precautionary statements in the Annex 3 tables, including whether they should be retained, expanded upon or deleted from the tables in Annex 3. A number of errors, inconsistencies and other issues were identified as detailed in paragraphs 4-19 (Section 1); 25-42 (Section 2); and 50-52 (Section 3) below. Following the review, the group provided a separate document to the secretariat detailing the identified errors and the necessary corrections to Annex 3 of the GHS.

* A/75/6 (Sect.20), para. 20.51.



Section 1: Combined hazard statements

Retention of combined hazard statements

4. Hazard statements are a standardised label element in the harmonised system, which should not be subject to variation and should appear on the GHS label (see 1.4.6.2) unless otherwise specified in 1.4.10.5.3.3.
5. A number of combined hazard statements are provided in Section 1. These combinations are only within an equivalent severity of hazard categories (e.g. acute toxicity only statements including “Toxic” can be combined) and/or within the same hazard classes (e.g. a statement such as “toxic if swallowed and to aquatic life” would not be permitted).
6. The use of combined hazard statements is considered to be optional rather than mandatory, leaving the competent authorities to specify whether the combined hazard statements or the corresponding individual statements should appear on the label, or to leave the choice to the manufacturer/supplier (see ST/SG/AC.10/C.4/2008/24 and A3.1.2.4).
7. Following due consideration of whether the combined hazard statements provided in the tables of section 1 should be retained, expanded upon or removed entirely from the section, overall, the group concluded that users of the GHS would benefit from retaining some of the existing combined hazard statements in the tables as they demonstrate how such combinations could be achieved. However, it was also considered that some of the current combined hazard statements in Table A3.1.2 could be rationalised (see paragraphs 8 to 12 below).

Acute toxicity combined hazard statements

8. For each acute toxicity hazard category, all possible combination statements are provided in Table A3.1.2: three combinations of two statements comprising the hazard plus the relevant routes of exposure (e.g. H300+H330 “**Fatal if swallowed or if inhaled**”), together with one combined statement consisting of the same hazard with all three routes of exposure (oral; dermal; inhalation) for that category. Although it is noted that not all routes of exposure may be relevant to a substance/mixture classified as having a particular acute toxic hazard category, in other cases all routes of exposure are applicable.
9. Section 1 provides guidance on the use of individual and combined hazard statements, and as mentioned above, the responsibility for determining which should be used on the label rests with competent authorities (or they may leave the choice to the manufacturer/supplier).
10. Given the above, the group considered whether it was necessary to provide the two-statement combination statements or if it would be better to remove them from the table and just provide the three-statement combination for each acute toxicity hazard category in Table A3.1.2. Furthermore, the group noted that if the two-statement combinations were removed from the table, with the proposed clarification to Section 1 regarding the permitted minor textual variations when combining statements (see paragraphs 18 to 19 below), the two-statement acute toxicity combined hazard statements could be derived from the three-statement acute toxicity combined hazard statements.
11. Consequently, the group concluded that the entries for the two-statement acute toxicity combined statements were unnecessary in the table and propose that these are all deleted from Table A3.1.2. Furthermore, the deletion of these two statement combinations would effectively “declutter” the table through the removal of twelve combined statements.
12. Finally, as only the two-statement combination statements are proposed to be deleted and the individual statements from which they had been derived and the associated three-statement combination statements will remain in the table, the group considered that it was not necessary to insert the word “deleted” to indicate that these combination statements have been removed from the table.

H315 + H320 “Causes skin and eye irritation”

13. The combined hazard statement: H315 + H320 “**Causes skin and eye irritation**” was introduced into Table A3.1.2 (see ST/SG/AC.10/C.4/2008/24) because many substances and mixtures have properties leading to classification with the following two hazard classes and categories:

- Skin corrosion/irritation, category 2: “**Causes skin irritation**” (H315)
- Serious eye damage/eye irritation, category 2B: “**Causes eye irritation**” (H320)

14. However, the hazard classification of serious eye damage/eye irritation, category 2B is not relevant in all jurisdictions, whereas the classification of serious eye damage/eye irritation, category 2/2A, is relevant in all jurisdictions that have implemented this hazard class.

15. Hence as serious eye damage/eye irritation, category 2/2A is more relevant the informal working group considered that it would be appropriate to replace the hazard statement H320 in the combined statement entry: H315 + H320 “**Causes skin and eye irritation**” in Table A3.1.2 with the hazard statement H319 “**Causes serious eye irritation**” as this hazard statement applies to hazard class and category of serious eye damage/eye irritation, category 2/2A.

16. Consequently, for H315 + H320, the group proposes to amend the statement “**Causes skin and eye irritation**” to read: “**Causes skin and serious eye irritation**” in Table A3.1.2, as shown below: (deleted text is shown in strikethrough and new text shown in **, underlined**).

Code (1)	Health hazard statements (2)	Hazard class (GHS chapter) (3)	Hazard category (4)
H315 + H320 <u>H319</u>	Causes skin and <u>serious</u> eye irritation	Skin corrosion/irritation (chapter 3.2) and serious eye damage/eye irritation (chapter 3.3)	2 (skin <u>and eye</u>)/ 2BA (eye)

17. Alternatively, if the Sub-Committee considered that it was appropriate to retain the H315 + H320 combination statement, a separate new entry for H315 + H319 “**Causes skin and serious eye irritation**” could be introduced into Table A3.1.2.

Variations in the text of combined hazard statements

18. Although paragraph 1.4.6.2 states that there should be no variation, some textual amendments have been made to improve the readability of the combined hazard statements as indicated in the example provided in A3.1.2.3 and the combinations listed in Table A3.1.2. Text has been removed from the individual hazard statements (e.g. “Fatal”; “May be harmful”) that would be duplicated in the resultant combined statements that use the joining word “or” in between two combined statements, or where there are three combined statements, use of both a comma “,” after the first statement followed by the joining word “or” after the second hazard statement e.g. H303+H313+H333: “**May be harmful if swallowed, in contact with skin or if inhaled.**”. This implies that some minor textual amendments are allowed when combining hazard statements, though the text in Section 1 is not explicit on this.

19. Consequently, to provide the necessary clarity within Section 1, the group propose the following:

- amend paragraph A3.1.2.3 to extend the example provided in the last sentence to a three-statement combined hazard statement (deleted text is shown in strikethrough and new text in **bold**):

“H300+H310+~~H330~~: “Fatal if swallowed, ~~or~~ in contact with skin **or if inhaled**”

- amend the last sentence of paragraph A3.1.2.4 to clarify that there may be other combinations of hazard statements other than those listed in the tables of Section 1 that may be necessary on the label (deleted text is shown in strikethrough and new text in **bold**):

“Also, where a combined hazard statement ~~is indicated for~~ **consisting of** two or more hazard statements **may be necessary**, the competent authority may specify whether the combined hazard statement or the corresponding individual statements should appear on the label, or may leave the choice to the manufacturer/supplier.”.

- introduce a new paragraph A3.1.2.5 as shown in paragraph 24 below to explicitly state that minor textual changes such as the use of a joining word and/or punctuation to remove repetitive text and improve the readability or clarity of the combined hazard statements.

Proposed amendments to Section 1

20. In Table A3.1.2 delete the following combined statements:

- H300 + H310
- H300 + H330
- H310 + H330
- H301 + H311
- H301 + H331
- H311 + H331
- H302 + H312
- H302 + H332
- H312 + H332
- H303 + H313
- H303 + H333
- H313 + H333

21. In Table A3.1.2, for the “H315+H320” combined hazard statement entry:

In column 1 replace “H320” with: “H319”.

In column 2 amend the hazard statement to read: “**Causes skin and serious eye irritation.**”.

In column 4 amend the hazard category to read: “2 (skin and eye)/2A (eye)”.

22. In A3.1.2.3, replace the last sentence with:

“For example, H300 + H310 + H330 indicates that the text to appear on the label is “**Fatal if swallowed, in contact with skin or if inhaled**”.”

23. In A3.1.2.4, last sentence, amend the beginning of the sentence before the words “the competent authority” to read as follows:

“Also, where a combined hazard statement consisting of two or more hazard statements may be necessary, ...”

24. Insert a new paragraph A3.1.2.5 to read as follows:

“A3.1.2.5 To provide greater clarity and improve readability when more than one statement appears, minor textual changes are allowed, such as the removal of text that

would be repetitive in the combined statement, use of joining words (e.g. “and”, “or”), use of additional punctuation, and the change of case of the initial letter of the word at the beginning of a statement.”

Section 2: Combined precautionary statements:

Retention of combined precautionary statements

25. Precautionary statements provide details of recommended measures that should be taken for a given hazard class/category, e.g. P203 “**Obtain, read and follow all safety instructions before use.**”, P316 “**Get emergency medical help immediately.**”. They are a non-standardised label element in the harmonised system, though should still be provided on the GHS label (see A3.2.1.4).

26. A3.2.5.2.2 makes it clear that the combined precautionary statements provided in Section 2 (and Section 3) are only examples and that those responsible for labelling should combine and consolidate statements where it improves the clarity and comprehensibility of the label information.

27. Although some may question the value of providing only example combination statements in the tables, particularly as those who have the responsibility for labelling their chemical products know their products best and will use the appropriate combinations whether they are listed in the tables or not, it is not possible or appropriate to provide an exhaustive list of combination statements in the tables.

28. Therefore, following due consideration of whether the combined precautionary statements provided in the tables of Section 2 should be retained, expanded upon or removed entirely from the section, overall, the group concluded that users of the GHS would benefit from retaining the existing combined precautionary statements in the tables as they demonstrate how such combinations could be achieved.

Variations in the text of combined precautionary statements

29. With the exception of some combined medical response precautionary statements, the individual precautionary statements are usually provided sequentially in the combined statement (e.g. P301+P330+P331: “**IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.**”).

30. Although A3.2.5.3.1 details that, subject to the requirements of competent authorities, there is scope for minor textual variance of precautionary statements so long as it does not undermine the safety information, the text in A3.2.5.2 is not explicit regarding the minor textural variation that is allowed when combining precautionary statements that would improve the readability of the resultant statement.

31. Therefore, the group considered that it would be appropriate to amend the text in section A3.2.5.2 to provide the necessary clarity that a joining word, punctuation or the change of case of the initial word of a precautionary statement is permitted where this improves the readability of a combined precautionary statement.

32. Consequently, the group propose to insert a new paragraph A3.2.5.2.4 as shown in paragraph 44 below.

Square brackets around precautionary statement codes

33. During the review, the group identified that in one instance a precautionary statement code was provided in brackets for P370+P380+P375[+P378] “**In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. [Use...to extinguish].**”.

34. The use of square brackets “[...]” is intended to indicate that the precautionary statement associated with the code does not apply in all cases. Although there is explanatory

text in A3.2.4.4 regarding use of square brackets around a statement, there is no explanatory text regarding the use of square brackets around a code.

35. Therefore, the group propose to resolve this issue by adding the new paragraph A3.2.2.4 as shown in paragraph 45 below.

P373 “DO NOT fight fire when fire reaches explosives” for self-reactive substances and mixtures Type A and organic peroxides Type A

36. During the combination statement review, the group identified that both self-reactive substances and mixtures Type A and organic peroxides Type A were listed under P373. However, inclusion of these hazard classes/categories under P373 could be considered as misleading/inaccurate as they are not explosives, though may have explosive characteristics.

37. The group considered that these hazard classes/categories should be removed from under P373 and placed under a more appropriate precautionary statement such as P375 **“Fight fire remotely due to the risk of explosion”** that is used for self-reactive substances and mixtures Type B and organic peroxides Type B. However, this was viewed as potentially under-representing the hazard for Type A of these same hazard classes.

38. After determining that there is no existing precautionary statement that would be more appropriate for these hazard class/categories to be placed under, the group concluded that for self-reactive substances and mixtures Type A and organic peroxides Type A, a new precautionary statement, based on P373, should be introduced into Table A3.2.3 for these hazard classes/categories.

39. Consequently, the group propose that these hazard classes/categories are deleted from under P373 and from the combined statement P370+P372+P380+P373, and included under a new precautionary statement “P374”, as follows:

“P374 **DO NOT fight fire when fire reaches substance or mixture.**”

40. The group also proposes a new combination statement is introduced into Table A3.2.2 specifically for self-reactive substances and mixtures Type A and organic peroxides Type A, as follows:

“P370+P372+P380+P374 **In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches substance or mixture.**”

Inconsistencies identified in Table A3.2.3 of Section 2

41. The group also identified an inconsistency between the combination statement: P302+P335+P334 **“IF ON SKIN: Brush off loose particles from skin. Immerse in cool water [or wrap in wet bandages].”** provided in Table A3.2.3 with that provided in the matrix table for substances and mixtures which, in contact with water, emit flammable gases, 1-2. To remove this inconsistency, the group considered that the wording provided in the matrix (P302+P335+P334 **“IF ON SKIN: Brush off loose particles from skin and immerse in cool water [or wrap in wet bandages].”**) improved the readability and proposed that this wording was also used in Table A3.2.3 for this combination statement. In addition, as pyrophoric solids (Category 1) are also listed under this combination statement the group noted that the matrix table for this hazard class would also require amending (see below under proposed amendments to the matrix tables).

42. The informal working group considered that this amendment should be made in Table A3.2.3 of Section 2.

Proposed amendments to Section 2:

43. In Table A.3.2.3 of Annex 3, Section 2, for P302+P335+P334:

In column 2 amend the precautionary statement to read:

“IF ON SKIN: Brush off loose particles from skin and immerse in cool water [or wrap in wet bandages].”

44. In Section A3.2.5.2, insert the following new paragraph:

“A3.2.5.2.4 To provide greater clarity and improve readability when more than one statement appears, minor textual changes are allowed, such as the removal of text that would be repetitive in the combined statement, use of joining words (e.g. “and”, “or”), use of additional punctuation (e.g. commas “,”), and the change of case of the initial letter of the word at the beginning of a statement. For example, P302+P335+P334 **“IF ON SKIN: Brush off loose particles from skin and immerse in cool water [or wrap in wet bandages].”**”

45. In Section A3.2.2 insert the following new paragraph:

“A3.2.2.4 Where square brackets [...] appear around a precautionary statement code, this indicates the precautionary statement is not appropriate in every case and should be used only in certain circumstances. In these cases, conditions for use explaining when the text should be used are given in column (5) of the tables.”.

46. In Table A3.2.3, for P373:

In column 3 delete: “Self-reactive substances and mixtures (chapter 2.8)” and “Organic peroxides (chapter 2.15)”.

In column 4 delete: “Type A” (twice).

47. In Table A3.2.3, after the P373 entry, insert a new precautionary statement entry: “P374” as follows:

(1)	(2)	(3)	(4)	(5)
P374	DO NOT fight fire when fire reaches substance or mixture	Self-reactive substances and mixtures (chapter 2.8)	Type A	
		Organic peroxides (chapter 2.15)	Type A	

48. In Table A3.2.3, for the P370+P372+P380+P373 entry:

In column 3 delete: “Self-reactive substances and mixtures (chapter 2.8)” and “Organic peroxides (chapter 2.15)”.

In column 4 delete: “Type A” (twice).

49. In Table A3.2.3, after the P370+P372+P380+P373 entry, insert a new combined precautionary statement entry: “P370+P372+P380+P374” as follows:

(1)	(2)	(3)	(4)	(5)
P370 + P372 + P380 + P374	In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches substance or mixture.	Self-reactive substances and mixtures (chapter 2.8)	Type A	
		Organic peroxides (chapter 2.15)	Type A	

Section 3: Combined statements in the matrix tables:

Inclusion of combined hazard statements in the matrix tables

50. The informal working group considered whether the matrix tables should be amended to include the combined hazard statements provided in the tables of Section 1.

51. The primary purpose of the matrix tables in Section 3 is to list the recommended precautionary statements for each hazard class and hazard category by type of precautionary statement as these are not listed in the hazard class chapters because precautionary statements are not standardised labelling elements.

52. The combined hazard statements are dependent on what hazard classes and categories a substance/mixture is classified in. Hence, including combined hazard statements in the matrix tables could therefore be considered misleading. Consequently, the group concluded that it would not be appropriate to include them in the matrix tables of Section 3.

Proposed amendments to the matrix tables in Section 3:

53. In Annex 3, Section 3, matrix table for self-reactive substances and mixtures (chapter 2.8), hazard category Type A, column “Response”, replace the P370+P372+P380+P373 entry with:

“P370+P372+P380+P374

In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches substance or mixture.”

54. In Annex 3, Section 3, matrix table for pyrophoric solids (chapter 2.10), hazard category 1, column “Response”, replace the P302+P335+P334 entry with:

“P302+P335+P334

IF ON SKIN: Brush off loose particles from skin and immerse in cool water or wrap in wet bandages.”

55. In Annex 3, Section 3, matrix table for Organic peroxides (chapter 2.15), hazard category Type A, column “Response”, replace the P370+P372+P380+P373 entry with:

“P370+P372+P380+P374

In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches substance or mixture.”

Action requested

56. The Sub-Committee is invited to agree the proposed amendments to sections 1 to 3 of Annex 3 of the GHS as set out in this document in the following paragraphs:

- Section 1 proposed amendments are provided in paragraphs 20 to 24;
 - Section 2 proposed amendments are provided in paragraphs 43 to 49;
 - Section 3 proposed amendments are provided in paragraphs 53 to 55.
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