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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**

**Report of the Sub-Committee of Experts on the Globally  
Harmonized System of Classification and Labelling of  
Chemicals on its twenty-fourth session**

held in Geneva from 12 to 14 December 2012

**Addendum**

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## Annex I

### **Draft amendments to the fourth revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals**

#### **Chapters 1.3, 2.1, 2.8, 2.15, 3.1, 3.2, 3.3, 3.8, 3.9, 3.10 and 4.1**

**Document ST/SG/AC.10/C.4/2012/29** adopted (except amendments to sections 3.2.5.3 and 3.3.5.3) without modifications.

*(Note by the secretariat: The adopted text of sections 3.2.5.3 and 3.3.5.3 is contained in documents ST/SG/AC.10/C.4/2012/12 and ST/SG/AC.10/C.4/2012/13).*

#### **Chapters 2.2 to 2.7, 2.9 to 2.14, 2.16, 3.1 to 3.10, 4.1 and 4.2**

**Document ST/SG/AC.10/C.4/2012/18** adopted.

*(Note by the secretariat: The amendment applies only to the French version of the GHS).*

#### **Chapters 1.4, 3.2, 3.3 and annexes 1 to 3**

**Document ST/SG/AC.10/C.4/2012/16** adopted.

*(Note by the secretariat: The amendment applies only to the French version of the GHS).*

#### **Chapter 1.4**

**Document ST/SG/AC.10/C.4/2012/21** adopted with the following modification:

In the last sentence of new paragraph 1.4.10.4.3 replace “should not be used to replace a pictogram on labels or safety data sheets” with “should not appear on labels or in section 2 of the safety data sheet”.

#### **Chapter 1.5**

**Document ST/SG/AC.10/C.4/2012/25** adopted as amended by informal document INF.35 as follows:

The amendments to Chapter 1.2 are withdrawn.

Replace the amendment to Chapter 1.5 with the following:

1.5.3.3.4 Insert a new paragraph to read as follows:

“1.5.3.3.4 Additional safety and environmental information is required to address the needs of seafarers and other transport workers in the bulk transport of dangerous goods in sea-going or inland navigation bulk carriers or tank-vessels subject to IMO or national regulations. Paragraph A4.3.14.7 of Annex 4 recommends the inclusion of basic classification information when such cargoes are transported as liquids in bulk according to Annex II of

MARPOL and the IBC Code. In addition, ships carrying oil or oil fuel, as defined in Annex I of MARPOL, in bulk or bunkering of oil fuel are required before loading to be provided with a “material safety data sheet” in accordance with the IMO’s Maritime Safety Committee (MSC) resolution “Recommendations for Material Safety Data Sheets (MSDS) for MARPOL Annex I Oil Cargo and Oil Fuel” (MSC.286(86)). Therefore, in order to have one harmonized SDS for maritime and non-maritime use, the additional provisions of Resolution MSC.286(86) may be included in the GHS SDS, where appropriate, for marine transport of MARPOL Annex I cargoes and marine fuel oils.”.

### Chapter 2.3

Document ST/SG/AC.10/C.4/2012/23 adopted without modifications.

### Chapter 2.14

Document ST/SG/AC.10/C.4/2012/11 adopted with the following modification:

In Note 1 under table 2.14.1, replace “(BC Code<sup>4</sup>, Annex 3, Test 5)” with “(IMSBC<sup>1</sup> Code, Appendix 2, Section 5)”.

Amend the text of the related footnote to read: “<sup>1</sup> International Maritime Solid Bulk Cargoes Code, IMO.”.

### Chapter 3.2

Document ST/SG/AC.10/C.4/2012/12 adopted as amended by informal document INF.26 as follows:

In paragraph 3.2.5.2, decision logic 3.2.2:

- Amend the text in the fifth box of the decision logic (page 11 of the English version of the document) to read as follows:
 

“Does the mixture contain  $\geq 3\%^{4,5}$  of an ingredient which is irritant (see 3.2.1.1, 3.2.2.1.2 and 3.2.2.2) when the additivity approach may not apply (see 3.2.3.3.4)?”
- In the last box of the decision logic (page 12 of the English version of the document) delete “for which” in the first sentence, so that it reads:
 

“Does the mixture contain one or more corrosive or irritant ingredients<sup>4</sup> when the additivity approach...” (*remainder of the text unchanged*).

### Chapter 3.3

Document ST/SG/AC.10/C.4/2012/13 adopted as amended by informal document INF.26, with one additional correction to paragraph 3.3.2 (b), as follows:

- In the introductory sentence of paragraph 3.3.2 (b), delete “serious” before “eye irritation”.
- Amend paragraph 3.3.2.1.2.1 to read:
 

“3.3.2.1.2.1 Substances that have the potential to induce reversible eye irritation should be classified in Category 2 where further categorization into Category 2A

and Category 2B is not required by a competent authority or where data are not sufficient for further categorization. When a chemical is classified as Category 2, without further categorization, the classification criteria are the same as those for Category 2A.”.

- In Table 3.3.2, in the first column replace “Category 2A” with “Category 2/2A”.
- Amend the text related to the hazard statements in the French version of Chapter 3.3 in accordance with the amendments listed in document ST/SG/AC.10/C.4/2012/16 (i.e. replacement of “oculaire” by “des yeux”).

## Chapter 3.5

3.5.2.6 For “Mouse spot test (OECD 484)”, insert a reference to the following new footnote and renumber the remaining footnotes accordingly:

“<sup>1</sup> This Test Guideline has been cancelled but may continue to be used until 2 April 2014.”.

(Ref. Doc.: Informal document INF.14)

## Annexes 1 and 2

**Document ST/SG/AC.10/C.4/2012/22** adopted as amended by informal document INF.31, with one additional amendment to the layout of tables A1.1 to A1.29, as follows:

- Amend the heading of all tables to read as follows:

Classification		Labelling			Code	
Hazard class	Hazard category	Pictogram		Signal word		Hazard statement
		GHS	UN Model Regulations <sup>a</sup>			

- In Table A1.18, under “Hazard category”, delete “Corrosive (including A, B and C)”, “Irritant” and “Mild irritant<sup>a</sup>” and replace “3” with “3<sup>a</sup>”.
- In Table A1.19, under “Hazard category”, delete “Irreversible effects”, “Irritant” and “Mild irritant”.
- In Table A1.24 replace “Toxic to reproduction” with “Reproductive toxicity” in the title and under the heading “Hazard class”.
- In Table A1.25 replace “toxicity following single exposure” with “toxicity – single exposure” in the title and under the heading “Hazard class”.
- In Table A1.26 replace “toxicity following repeated exposure” with “toxicity – repeated exposure” in the title and under the heading “Hazard class”.
- In Table A1.28 (a) replace “Short-term (acute) hazards to the aquatic environment” with “Hazardous to the aquatic environment, short-term (acute)” in the title and under the heading “Hazard class”.
- In Table A1.28 (b) replace “Long-term (chronic) hazards to the aquatic environment” with “Hazardous to the aquatic environment, long-term (chronic)” in the title and under the heading “Hazard class”.

- In Table A1.29, under the heading “Hazard class”, replace “Hazards” with “Hazardous”

## Annex 3, Section 2

**Documents ST/SG/AC.10/C.4/2012/19** and **ST/SG/AC.10/C.4/2012/20** adopted as amended by informal documents INF.5 and INF.5/Add.1, with an additional modification to P313 and P315, as follows:

- (a) Amendments to the proposals in document ST/SG/AC.10/C.4/2012/19:
- **For P210**, add the following additional amendment:  
 “Delete the row for category 4 flammable liquids and insert “4” in the row for flammable liquids, categories 1, 2, 3”.  
 (Ref. doc: informal document INF.5)
  - **For P230**, add the following additional amendment:  
 “Delete the existing condition for use (“- if drying out increases explosion hazard, except as needed for manufacturing or operating processes (e.g. nitrocellulose)”)."."  
 (Ref. doc: informal document INF.5)
  - **For P233**, add the following additional amendment:  
 “For acute toxicity (categories 1, 2, 3) and specific target organ toxicity (single exposure, respiratory tract irritation and narcotic effects, Category 3), amend the condition for use to read: “- if the chemical is volatile and may generate a hazardous atmosphere.”.”  
 (Ref. doc: informal document INF.5)
  - **For P235**, in the new condition for use for flammable liquids, add “flammable” after “other” so that the text reads “... and other flammable liquids that are volatile...”.  
 (Ref. doc: informal document INF.5)
  - **For P280**, replace the amendment in document ST/SG/AC.10/C.4/2012/19 and in informal document INF.5 with the following:  
**“For P280**  
 For Explosives (chapter 2.1):  
 remove the condition for use “- specify face protection” and amend the remaining wording to read: “manufacturer/supplier or the competent authority to specify the appropriate type of equipment”.  
 For the group of hazard classes “Acute toxicity (dermal)”, “Skin corrosion”, “skin irritation”, “skin sensitisation”, “severe eye damage” and “eye irritation”:  
 in the condition for use, *replace* “Manufacturer/supplier or the competent authority to specify type of equipment” *with* “Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate”.  
 For the group of hazard classes “Flammable liquids”, “Flammable solids”, “self-reactive substances and mixtures”, “pyrophoric liquids”, “pyrophoric solids”, “self-heating substances and mixtures”, “Substances and mixtures which, in contact with water, emit flammable gases”, “oxidizing liquids”, “oxidizing solids” and “Organic peroxides”:

remove the condition for use: “- *specify protective gloves and eye/face protection*” and amend the remaining wording to read: “manufacturer/supplier or the competent authority to specify the appropriate type of equipment”.

For the group of hazard classes “Germ cell mutagenicity”, “carcinogenicity” and “reproductive toxicity”:

amend the condition for use to read “manufacturer/supplier or the competent authority to specify the appropriate type of equipment”.

(Ref. doc: informal document INF.5/Add.1)

- **For P372**, add the following additional amendment:

“For the hazard class “Explosives” (Division 1.4) add the condition for use “- *except for explosives of division 1.4 (compatibility group S) in transport packaging*.”.”

(Ref. doc: informal document INF.5)

- **For P373**, replace the first amendment with the following:

“For the hazard class “Explosives” (Division 1.4) add the condition for use “- *except for explosives of division 1.4 (compatibility group S) in transport packaging*.”.”

(Ref. doc: informal document INF.5)

- **For P375**, in the condition for use replace “1.4S” with “1.4 (compatibility group S)”.

(Ref. doc: informal document INF.5)

- **For P335 + P334 (new P302 + P335 + P334)**, add the following additional amendment:

“For pyrophoric solids, add the condition for use: “- *text in square brackets to be used for pyrophoric solids*.”.”

(Ref. doc: informal document INF.5)

- **For P336 + P315**, add the condition for use: “Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.”

*(Note by the secretariat: the amendment to P336 + P315 in informal document INF.5 is superseded by the amendment to P315 adopted during the session, see amendments to P313 and P315 in sub-paragraph b) below).*

- **For P370 + P378**, replace the amendment with the following:

“Remove the statement from the hazard categories “Self-reactive substances and mixtures”, types A and B. (Statement should only be applied to self-reactives Types C, D, E and F).

Apply additionally to Organic peroxides, Types C, D, E and F.”.

(Ref. doc: informal document INF.5)

- **For P370 + P372 + P380 + P373**, add the following additional amendment:

“For the hazard class “Explosives” (Division 1.4) add the condition for use “- *except for explosives of division 1.4 (compatibility group S) in transport packaging*.”.”

(Ref. doc: informal document INF.5)

- **For P370 + P380 + P375**

In the condition for use for Division 1.4, replace “1.4S” with “1.4 (compatibility group S)”

Replace the amendment related to self-reactive substances and mixtures and organic peroxides with the following:

“Remove the statement from the hazard categories Self-reactive substances and mixtures, Types A and B.”

*(Ref. doc: informal document INF.5)*

- **For P403**, in the condition for use, add “flammable” after “other” so that the text reads “... and other flammable liquids that are volatile...”.

*(Ref. doc: informal document INF.5)*

- **For P403 + P235**

Replace the amendments in document ST/SG/AC.10/C.4/2012/19 and in informal document INF.5 with the following:

**“For P403+P235**

Delete the row for self-reactive substances and mixtures Types A, B, C, D, E, F.

Delete category 4 for flammable liquids. For the remaining categories 1, 2 and 3 add the following new condition for use:

“- for flammable liquids Category 1 and other flammable liquids that are volatile and may generate an explosive atmosphere”.

*(Ref. doc: informal document INF.5)*

(b) Amendments to the proposals in document ST/SG/AC.10/C.4/2012/20:

- **For P313**, replace the amendment with the following:

“Add the condition for use: “Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.”.

- **For P315**, replace the amendment with the following:

“Add the condition for use: “Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.”.

- **For P411 and P413**, split the amendment as follows:

**“P411**

Amend the condition for use to read: “Manufacturer/supplier or the competent authority to use applicable temperature scale.”

**P413**

Amend the condition for use to read: “...Manufacturer/supplier or the competent authority to specify mass and temperature using applicable scale.”.

*(Ref. doc: informal document INF.5)*

- **For P412**, amend the condition for use to read: “Manufacturer/supplier or the competent authority to use applicable temperature scale.”

*(Ref. doc: informal document INF.5)*

- (c) Additional amendments to the precautionary statements in Annex 3 of the GHS:
- **P314**  
Amend to read “Get medical advice if you feel unwell”.  
(Ref. doc: informal document INF.5)
  - **P321**  
Delete the dash before the condition for use “Manufacturer/supplier...” and show it as plain text (i.e.: non-italicized).  
(Ref. doc: informal document INF.5)
  - **P235 + P410**  
Delete.  
(Ref. doc: informal document INF.5)
  - **P302 + P334**  
Amend the combined statement to read: “IF ON SKIN: Immerse in cool water [or wrap in wet bandages].  
Add condition for use: “- text in square brackets to be used for pyrophoric liquids”.  
(Ref. doc: informal document INF.5)
  - **P370 + P380 + P375 [+ P378] (new)**  
Add a new combination statement P370 + P380 + P375 [+ P378] to read as follows:  
“In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. [Use...to extinguish.]”  
Add the conditions for use:  
“- text in square brackets to be used if water increases risk.”  
“...Manufacturer/supplier or the competent authority to specify appropriate media.”  
Apply this combination statement to self-reactive substances Type B and organic peroxides Type B.  
(Ref. doc: informal document INF.5)
  - **P403 + P233**  
Amend condition for use to read: “- if the chemical is volatile and may generate a hazardous atmosphere”.  
(Ref. doc: informal document INF.5)
  - **P410 + P403**  
Amend the beginning of the condition for use to read: “P410 may be omitted for gases...”.  
(Ref. doc: informal document INF.5)



## Annex 3, Section 4

Document ST/SG/AC.10/C.4/2012/21 adopted as amended by informal document INF.19 with an additional modification to A3.4.1.3, as follows:

Insert a new section 4 in Annex 3 to read as follows:

### “Annex 3

#### Section 4

### CODIFICATION OF PICTOGRAMS

#### A3.4.1 Introduction

A3.4.1.1 *Pictogram* means a graphical composition that may include a symbol plus other graphic elements, such as a border, background pattern or colour that is intended to convey specific information.

A3.4.1.2 This section contains the recommended code assigned to each of the pictograms prescribed by the GHS for sectors other than transport.





A3.4.1.3 The pictogram code is intended to be used for references purposes. It is not part of the pictogram and should not appear on labels or in section 2 of the safety data sheet.






#### A3.4.2 Codification of pictograms

A3.4.2.1 GHS pictograms for sectors other than transport are assigned a unique alphanumerical code as follows:

- (a) the letters “GHS”; and
- (b) a sequential number “01”, “02”, “03” etc. assigned in accordance with Table A3.4.1 below.

Table A3.4.1

Code	Hazard pictogram	Symbol
GHS01		Explosion
GHS02		Flame
GHS03		Flame over circle
GHS04		Gas cylinder

Code	Hazard pictogram	Symbol
GHS05		Corrosion
GHS06		Skull and crossbones
GHS07		Exclamation mark
GHS08		Health hazard
GHS09		Environment

»

*Consequential amendments*

- Amend the title of Annex 3 and its related entry in the table of contents to read:  
“CODIFICATION OF HAZARD STATEMENTS, CODIFICATION AND USE OF PRECAUTIONARY STATEMENTS, CODIFICATION OF HAZARD PICTOGRAMS AND EXAMPLES OF PRECAUTIONARY PICTOGRAMS”
- Current section 4 in Annex 3 of the GHS becomes new section 5.

## Annex 4

**Document ST/SG/AC.10/C.4/2012/28** adopted with the following modifications:

In the new sentence to be inserted in A4.3.2.3 and A4.3.5.1 replace “dust/air mixture” with “dust-air mixture”.

In the French version, in the new sentence to be inserted in A4.3.2.3, replace “Risque d’apparition d’un mélange explosible d’air et de poussière” par “Peut former un mélange explosible d’air et de poussière”.

**Document ST/SG/AC.10/C.4/2012/25** adopted as amended by informal document INF.35 as follows:

In A4.3.12.4, first sentence, replace “A4.3.12.5 and A4.3.12.9” with “A4.3.12.5 to A4.3.12.9”.

## Annex 9

In Appendix V, paragraph 2, fourth line, after “OECD Test Guideline 204 (1984) Fish, Prolonged Toxicity Test: 14-Day Study”, insert a reference to the following new footnote:

<sup>2</sup> This Test Guideline has been cancelled but may continue to be used until 2 April 2014.”.

Amend the beginning of the text of current footnotes 1, 2 and 3 in Annex 9, to read “The list below will need...”.

*(Ref. Doc.: Informal document INF.14)*

## **Annex 10**

In the Appendix, Bibliography, fourth line, after “OECD Guideline for Testing of Chemicals, Paris (1992). Guideline 204: Fish, Prolonged Toxicity Test: 14-Day Study”, insert a reference to the following new footnote:

“<sup>3</sup> This Test Guideline has been cancelled but may continue to be used until 2 April 2014.”.

*(Ref. Doc.: Informal document INF.14)*

## Annex II

### Corrections to the fourth revised edition of the Globally Harmonized System of classification and labelling of chemicals

#### Chapter 2.1

Wherever it appears in figure 2.1.3, replace “substance” with “substance/mixture”.

(Ref. Doc: ST/SG/AC.10/C.4/2012/31)

#### Chapter 2.8

In the French version of the GHS, paragraph 2.8.2.2 (e), replace “ne déflagre pas rapidement” with “ne déflagre pas”.

*Note by the secretariat:* The correction does not apply to the English version of the GHS.

(Ref. Doc: ST/SG/AC.10/C.4/2012/17)

#### Chapter 4.1

Replace “acute (short-term)” with “short-term (acute)” 3 times (section 4.1.1.1, Table 4.1.1 and Decision logics in 4.1.5.1);

Replace “acute hazard” with “short-term (acute) hazard” 6 times (section 4.1.2.5, Table 4.1.2, 4.1.3.3.3, 4.1.3.5.2(a), 4.1.3.5.5.3.4, and Table 4.1.3);

Replace “acute” with “short-term (acute)” once (Figure 4.1.2 Title);

Replace “acute/long-term” with “short-term (acute)/long-term (chronic)” 4 times (all in Figure 4.1.2).

Replace “acute classification” with “short-term (acute) classification” 4 times (section 4.1.2.1 (twice), decision logics in 4.1.5.1.1(note 3), 4.1.5.2.4)

Replace “Long-term hazard” with “Long-term (chronic) hazard” 20 times (section 4.1.1.1, 4.1.2.1, 4.1.2.2, Figure 4.1.1, 4.1.2.5, 4.1.2.7 (twice), and Table 4.1.2 (twice including Note 5), 4.1.3.3.2, 4.1.3.3.4(b), 4.1.3.5.2(b), 4.1.3.5.5.4.5, Table 4.1.4, Decision Logics in 4.1.5.2.2, in 4.1.5.2.3 and in 4.1.5.2.4 (three times)).

Replace “Long-term aquatic” with “Long-term (chronic) aquatic” 3 times (Table 4.1.1(b), Figure 4.1.2 (Title) and in decision logics in 4.1.5.2).

Replace “chronic classification” with “long-term (chronic) classification” 3 times (section 4.1.2.1 (three times)).

Replace “chronic categories” with “long-term (chronic) categories” One time (Table 4.1.2 (note 2));

In table 4.1.6:

- For “ACUTE” and “CHRONIC” read “SHORT-TERM (ACUTE) AQUATIC HAZARD” and “LONG-TERM (CHRONIC) AQUATIC HAZARD” respectively;
- Replace “Category” with “Category Acute” (3 times) and with “Category Chronic” (4 times)

Decision logics: Wherever it appears in decision logics 4.1.1, and 4.1.3 (a) to (c), for “Acute Category” and “Chronic Category” read “Acute” and “Chronic”, respectively. (Applies 9 times to decision logic 4.1.1; once to decision logic 4.1.3(a); 3 times to decision logic 4.1.3 (b) and 3 times to decision logic 4.1.3 (c))

(Ref. Doc: ST/SG/AC.10/C.4/2012/24)

## Annex 9

Replace “acute hazard” with “short-term (acute) hazard” 5 times (section A9.2.1 (twice), A9.2.3.1 (twice), and A9.2.4.4).

Replace “long-term hazard” with “long-term (chronic) hazard” 10 times (section A9.2.1, A9.2.3.1, A9.2.3.2 (three times), A9.2.4.4 (twice), A9.2.6.3, A9.3.3.2.3(a), and A9.7.2.2.4.

Replace “chronic hazard” with “long-term (chronic) hazard” 2 times (section A9.2.3.1, and A9.2.3.2)

A9.2.3.1, third sentence, for “Chronic Category” read “Chronic” (twice)

A9.2.3.6, second sentence, for “Chronic Category” read “Chronic”

A9.2.4.5, for “Chronic Category” read “Chronic” (twice)

A9.3.3.1.2:

- second sentence, for “are classified in Chronic and/or Acute Category 1” read “are classified in Chronic 1 and/or Acute 1”
- third sentence, for “are classified in Category 2 for acute toxicity” read “are classified in category Acute 2” and for “in Category 3 for acute toxicity” read “are classified in category Acute 3”

A9.3.5.7.2:

- In (a), second sentence, for “it is likely that Chronic Category 1 and/or Acute Category 1” read “it is likely that Chronic 1 and/or Acute 1”
- In (b), second sentence, for “whether the Chronic Category 4 should apply” read “whether Chronic 4 should apply”

A9.4.2.4.8, in footnote 2, first sentence, for “Chronic Category” read “Chronic”

A9.7.5.2.3, for “Chronic Category” read “Chronic”

A9.7.5.2.4.1 (a), (b) and (c), for “Acute Category” read “Acute” and for “Chronic Category” read “Chronic”

A9.7.5.2.4.2, for “Chronic Category” read “Chronic” (twice)

A9.7.5.3.2.2 (a), (b) and (c), for “Acute Category” read “Acute” and for “Chronic Category” read “Chronic”

A9.7.5.3.3, for “Chronic Category” read “Chronic”

A9.7.5.3.3.1, for “Chronic Category” read “Chronic”

A9.7.5.3.3.2 (a), (b) and (c), for “Acute Category” read “Acute” and for “Chronic Category” read “Chronic”

A9.7.5.3.3.3 for “Chronic Category” read “Chronic” (twice)

(Ref. Doc: ST/SG/AC.10/C.4/2012/24)