

## 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

29 May 2011

### Twenty-third session

Geneva, 4 (p.m) – 6 July 2012

Item 3 of the provisional agenda

**Hazard communication issues**

## **Hazard communication in the supply/use sector for substances and mixtures “Corrosive to metals”**

**Transmitted by the International Association for Soaps, Detergents and  
Maintenance Products (AISE) on behalf of the informal  
correspondence group**

### **Background documents**

INF.31 (19th session); ST/SG/AC.10/C.4/2010/7; INF.21 (20th session); INF.32 (20th session); INF.22 (20th session); INF.10 (21st session), INF.25/INF.30 (22<sup>nd</sup> session)

### **Introduction**

1. At the 20<sup>th</sup> session in December 2010, the Sub-Committee of Experts on the GHS agreed the following competent authority option in GHS 1.4.10.5.5 to address potential issues which may arise if the physical hazard ‘Corrosive to Metals’ is adopted for supply/use situations:

*“Where a substance or mixture is classified as corrosive to metals but not corrosive to skin and/or eyes, the competent authority may choose to allow the hazard pictogram linked to corrosive to metals to be omitted from the label of such substances or mixtures which are in the finished state, packaged for consumer use.”*

2. However, the Sub-Committee considered this amendment to be a temporary solution thus agreed that an informal correspondence group should be established to develop a permanent solution in the biennium 2011 – 2012.

3. As reported in INF.10 (21st session), the correspondence group originally identified five possible options for a permanent solution to address the potential issues associated with the adoption of “Corrosive to metals” in the supply/use sector:

- (a) Option 1 – Make the current competent authority option in GHS 1.4.10.5.5 (as adopted by the Sub-Committee in Dec 2010) the permanent solution;
- (b) Option 2- Insert a clear statement that the hazard class “Corrosive to metals” is not relevant for consumers i.e. statement in Annex 1 to the GHS along the lines of the statement “Not required under UN Model Regulations” which appears in certain hazard classes/categories;

- (c) Option 3 – Separate pictograms for metal corrosion and skin corrosion;
  - (d) Option 4 – Add a new pictogram to distinguish ‘corrosive to eye’ to the separate pictograms proposed in option 3;
  - (e) Option 5 – Delete the hazard pictogram label element completely in Chapter 2.16.
4. These options were then further considered by the correspondence group at their meeting held in plenary during the 21st session and by email/conference call in October/November 2011.
5. During a conference call on 30 November 2011, the correspondence group further considered the five existing options (including the modifications to options 3 and 5) plus the new option (option 6). The conference call participants also agreed not to progress options 1, 2 and 4.
6. During the conference call discussions on option 5 and the proposed modification, it was suggested to replace the corrosion pictogram in GHS Table 2.16.2 with an exclamation mark pictogram.
7. The conference call participants agreed to further consider the following options at the correspondence group meeting during the 22nd session - option 3 and the proposed modification, option 5 and the proposed modifications (options 5a, 5b, 5c), and option 6.
8. During discussions at the meeting held in plenary at the 22nd session, the correspondence group confirmed that options 1, 2 and 4 should not be progressed as possible permanent solutions to address the potential issues associated with the adoption of “Corrosive to metals” in the supply/use sector. The correspondence group further agreed that option 3, option 5 and the proposed modifications (options 5a, 5b, 5c), and option 6 should be worked up (i.e. develop possible text for inclusion in the GHS and identify any consequential changes) for further consideration in 2012.
9. As reported in INF.30 (22nd session), it was identified that the final option will need to take account of the following concerns:
- (a) Pictogram should appear on the label;
  - (b) No differentiation and no labelling differences between consumer and workplace;
  - (c) Impact associated with the introduction of new pictograms;
  - (d) No changes for transport;
  - (e) Impact on harmonisation if the proposed solution is adopted as a competent authority option;
  - (f) Level of protection not lowered;
  - (g) Impact associated with the introduction of limited quantity exemptions.
10. During a conference call on 10 May 2012, the correspondence group reviewed the existing possible options for a permanent solution and agreed that a new proposed modification to option 5 (replace the corrosion pictogram in GHS Table 2.16.2 with the ‘corrosive to metals only’ pictogram) warranted further consideration. This new proposed modification to option 5 is included in Annex 1 as option 5.2.
11. The conference call participants also agreed not to progress possible options 5a and 5c (see Annex 2 for rationale).
12. The conference call participants agreed to further consider the following options at the correspondence group meeting during the 23rd session - option 3 and the proposed modification, option 5 and the proposed modifications (options 5.1, 5.2) and option 6.

## **Next steps**

13. Possible text to amend GHS for the candidate options is set out in Annex 1.
14. The correspondence group welcomes comments from the Sub-Committee on the candidate options set out in Annex 1 and associated draft GHS amendments.

## Annex 1

### Possible options for a permanent solution to address the identified issues associated with the adoption of the hazard class ‘corrosive to metals’ in the supply/use sector with proposed amendments to the GHS Rev. 4.

#### Option 3

Different pictograms (as proposed by France in INF.22 (20<sup>th</sup> session) – merit to distinguish the two hazards) e.g.:

CORROSIVE TO METALS and SKIN/EYES	CORROSIVE TO METAL (only)	CORROSIVE TO SKIN/EYES (only)
		

#### PRO –

- (i) Easy to distinguish between those substances/mixtures corrosive to skin (and hence by implication corrosive to eyes) and those only corrosive to metals but not corrosive to skin.
- (ii) Emergency responders would know instantly what type of hazard i.e. physical or health – may adopt different approach if know that only dealing with corrosive to metals rather than corrosive to skin.
- (iii) No need to differentiate between consumer and workplace.
- (iv) Pictogram appears on the label – pictogram considered important for communication in that it serves as a quick visible reminder that need to take care when handling the product.

#### CON –

- (i) More pictograms – could be managed if precedence rules established thereby reducing the number of pictograms required on a label.
- (ii) Difficult to introduce new pictograms.
- (iii) Changes may impact on the transport sector – will need to dialogue with transport colleagues (alternatively, could just adopt the different corrosion pictograms for supply i.e. consumer and workplace).
- (iv) Potential costs associated with having to change pictograms on a wide range of substances and mixtures that carry the existing corrosive pictogram – however, costs could be mitigated if use of the ‘split’ pictograms were to be optional for suppliers.
- (v) Potential impact on Chapters 3.2 and 3.3.

Proposed modification to option 3:

*A competent authority may choose to allow a modified corrosion pictogram on the label of the immediate container of a product that is classified corrosive in accordance with only a) Chapter 2.16, or b) Chapters 3.2 and/or 3.3, but not both a and b, unless that label must also display a UN Model Regulations on the Transport of Dangerous Goods pictogram for corrosivity. The modified corrosion pictogram would display, in the case of a product classified corrosive in accordance with Chapter 2.16 but not 3.2 or 3.3: the corrosive to metal(only) symbol, and, in the case of a product classified in one or both of Chapters 3.2 and 3.3, but not 2.16: the corrosive to skin/eyes(only) symbol.*

**PRO –**

- (i) to (iv) (same as currently listed for option 3 above)
- (v) No need to make modifications to any existing labels or even future labels, if not desired. Suppliers could continue to choose to use the combined pictogram even if authorities allowed them the choice of using the separated pictogram.
- (vi) No changes required by the transport sector. Transport labels would continue to bear the same (combination) pictogram.

**CON –**

- (i) More pictograms.
- (ii) Difficult to introduce new pictograms.
- (iii) Inconsistency between suppliers that choose to use the separate pictogram and those that do not.
- (iv) Impact on harmonisation - could lead to different labelling in different countries if progressed as a competent authority option.
- (v) Potential impact on Chapters 3.2 and 3.3.

**Option 3 - Proposed amendment to the GHS Rev. 4**

Replace the 3<sup>rd</sup> paragraph in 1.4.10.5.5 with the following text and pictograms:

“A competent authority may choose to allow a modified corrosion pictogram (provided below) on the label of the immediate container of a product that is classified corrosive in accordance with only a) Chapter 2.16, or b) Chapters 3.2 and/or 3.3, but not both a and b, unless that label must also display a UN Model Regulations on the Transport of Dangerous Goods pictogram for corrosion. The modified corrosion pictogram would indicate, in the case of a product classified corrosive in accordance with Chapter 2.16 but not 3.2 or 3.3: the corrosive to metals (only) symbol, and, in the case of a product classified in one or both of Chapters 3.2 and 3.3, but not 2.16: the corrosive to skin/eyes (only) symbol.”

CORROSIVE TO METALS <u>and</u> SKIN/EYES	CORROSIVE TO METALS (only)	CORROSIVE TO SKIN/EYES (only)
		

The Note below Table 2.16.2 in GHS 2.16.3 remains in the text.

**Option 5:****Delete the hazard pictogram label element completely in Chapter 2.16 (with consequential amendments throughout the GHS).**

The signal word and hazard statement would remain and be applied throughout the “supply/use” sector including consumers.

Table 2.16.2 would be modified accordingly:

**Table 2.16.2: Label elements for substances and mixtures corrosive to metals**

	<b>Category 1</b>
<b>Symbol</b>	<i>No symbol</i>
<b>Signal word</b>	Warning
<b>Hazard statement</b>	May be corrosive to metals

**PRO –**

- (i) Hazard ‘Corrosive to Metals’ is communicated throughout the ‘supply & use’ sector including consumers.
- (ii) No need to tackle the difficulties with defining a ‘consumer sector’ – many products sold as consumer products are also used professionally and in the workplace. For instance, the same product may be sold to, and used by, both consumers and professional users in which case differentiated labelling would cause disharmonisation and confusion.
- (iii) Nothing changes for the transport sector i.e. the warning label for transport is retained and remains unchanged (GHS Annex 1 table would still show the transport pictogram).
- (iv) No competent authority option introduced – will have harmonised labelling in all countries adopting this hazard class.

**CON –**

- (i) No pictogram on the label – pictogram considered important for communication in that it serves as a quick visible reminder that need to take care when handling the product.
- (ii) Inconsistency with the rest of GHS - no other Category 1 classification without a pictogram.

**Option 5 - Proposed amendment to the GHS Rev. 4**

Delete the corrosion symbol in GHS Table 2.16.2 and insert the words ‘*No symbol*’ in its place, i.e.

**Table 2.16.2: Label elements for substances and mixtures corrosive to metals**

	<b>Category 1</b>
<b>Symbol</b>	<i>No symbol</i>
<b>Signal word</b>	Warning
<b>Hazard statement</b>	May be corrosive to metals

*Consequential amendments:*

- (1) Delete the 3rd paragraph in GHS 1.4.10.5.5
- (2) Delete the Note below Table 2.16.2 in GHS 2.16.3
- (3) GHS Annex 1 Corrosive to Metals (p 256) – remove GHS corrosion pictogram and insert the words ‘No pictogram’ in its place
- (4) GHS Annex 2, A2.16 (p 278) – remove corrosion symbol and insert the words ‘No symbol’ in its place
- (5) GHS Annex 3, Section 3 Corrosive to Metals (p 368) - remove corrosion symbol and insert the words ‘No symbol’ in its place

**Option 5.1:****Replace the corrosion pictogram in GHS Table 2.16.2 with an exclamation mark pictogram.**

If option 5 is to be progressed, it is suggested to use the exclamation mark symbol rather than no symbol. The use of a hazard pictogram is considered vital for hazard communication in instances where there may be a language or literacy barrier and it may also draw attention to the hazard statement.

**Rationale:**

- (a) The hazard class Corrosive to Metals currently has the corrosion pictogram with the signal word ‘Warning’ whereas Skin corrosion category 1 and Serious eye damage category 1 has the corrosion pictogram with the signal word ‘Danger’ – suggest this could be confusing for the consumer;
- (b) The corrosion pictogram is the only pictogram that applies to both a health hazard and a physical hazard;
- (c) The corrosion pictogram in the supply and use sector should only be used for Skin corrosion category 1 and Serious eye damage category 1;
- (d) The exclamation mark and signal word ‘Warning’ is also used for ‘Hazardous to the ozone layer’;
- (e) A switch to the exclamation mark for the supply and use sector would not impact on transport as they could continue to use their version of the corrosion pictogram for products corrosive to metals.

**PRO –**

- (i) Hazard ‘Corrosive to Metals’ is communicated throughout the ‘supply & use’ sector including consumers.
- (ii) Corrosion pictogram only used for health hazards in the supply/use sector.
- (iii) No differentiation and no labelling differences between consumer and workplace.
- (iv) Pictogram still appears on the label
- (v) Nothing changes for the transport sector i.e. the warning label for transport is retained and remains unchanged (GHS Annex 1 table would still show the transport pictogram).

- (vi) Avoids confusion for end-users (i.e. no corrosive pictogram from ‘corrosive to metals’ on products only irritant or not classified for skin/eye effects).
- (vii) Eliminates potential consumer confusion arising from the use of different signal words with the corrosion pictogram.
- (viii) Consistency with signal word ‘Warning’.
- (ix) No competent authority option introduced – will have harmonised labelling in all countries adopting this hazard class.

**CON –**

None identified

**Option 5.1 - Proposed amendment to the GHS Rev. 4**

Delete the corrosion symbol in GHS Table 2.16.2 and insert the exclamation mark symbol in its place, i.e.

**Table 2.16.2: Label elements for substances and mixtures corrosive to metals**

	<b>Category 1</b>
<b>Symbol</b>	Exclamation mark
<b>Signal word</b>	Warning
<b>Hazard statement</b>	May be corrosive to metals

*Consequential amendments:*

- (1) Insert the following precedence rule in GHS 1.4.10.5.3.1 – “(d) If the corrosion symbol appears for skin corrosion or serious eye damage, the exclamation mark should not appear where it is used for corrosive to metals.”
- (2) Delete the 3rd paragraph in GHS 1.4.10.5.5
- (3) Delete the Note below Table 2.16.2 in GHS 2.16.3
- (4) GHS Annex 1 Corrosive to Metals (p 256) – remove GHS corrosion pictogram and insert the GHS exclamation mark pictogram in its place
- (5) GHS Annex 2, A2.16 (p 278) – remove corrosion symbol and insert the exclamation mark symbol in its place
- (6) GHS Annex 3, Section 3 Corrosive to Metals (p 368) - remove corrosion symbol and insert the exclamation mark symbol in its place.

**Option 5.2:**

**Replace the corrosion symbol in GHS Table 2.16.2 with the modified corrosion to metals only symbol.**

**PRO –**

- (i) Proposed solution is simple to understand and to apply.
- (ii) Pictogram still appears on the label
- (iii) Hazard pictogram more related to the actual hazard.

- (iv) Corrosion pictogram only used for health hazards in the supply/use sector – avoids confusion for end-users (i.e. no corrosive pictogram from corrosive to metals on products only irritant or not classified for skin/eye effects).
- (v) No competent authority option introduced – will have harmonised labelling in all countries adopting this hazard class.
- (vi) No differentiation and no labelling differences between consumer and workplace labelling.
- (vii) Level of protection not lowered.
- (viii) No change for transport i.e. the warning label for transport is retained and remains unchanged (GHS Annex 1 table would still show the transport pictogram). If the transport pictogram for corrosion is applied on the label of a single packaging, then this transport pictogram will be sufficient for supply/use.

**CON –**

- (i) Could be deemed to introduce a new pictogram – however, should be seen as simplifying the existing pictogram, making it more explicit.

**Option 5.2 - Proposed amendment to the GHS Rev. 4**

Delete the corrosion symbol in GHS Table 2.16.2 and insert the corrosive to metals only symbol in its place, i.e.

**Table 2.16.2: Label elements for substances and mixtures corrosive to metals**

	<b>Category 1</b>
<b>Symbol</b>	Corrosive to metals only
<b>Signal word</b>	Warning
<b>Hazard statement</b>	May be corrosive to metals

*Consequential amendments:*

- (1) Insert the following precedence rule in GHS 1.4.10.5.3.1 – “(d) If the corrosion symbol appears for skin corrosion or serious eye damage, the corrosive to metals only symbol should not appear.”
- (2) Delete the 3rd paragraph in GHS 1.4.10.5.5
- (3) Delete the Note below Table 2.16.2 in GHS 2.16.3
- (4) GHS Annex 1 Corrosive to Metals (p 256) – remove GHS corrosion pictogram and insert the corrosive to metals only pictogram in its place
- (5) GHS Annex 2, A2.16 (p 278) – remove corrosion symbol and insert the corrosive to metals only symbol in its place
- (6) GHS Annex 3, Section 3 Corrosive to Metals (p 368) - remove corrosion symbol and insert the corrosive to metals only symbol in its place.

## **Option 6**

**Delete the sentence in GHS 1.4.10.5.5 altogether and revert back to the 3<sup>rd</sup> revised edition of the GHS in this part.**

### **Rationale**

Labelling for the hazard class ‘Corrosive to Metals’ in reality appears to be a minor issue. A search in the EU CLP Regulation Annex VI revealed only one entry with classification ‘Corrosive to Metals’ but not Serious eye damage category 1 or Skin corrosion category 1 (H290 but not H318 or H314).

However, it was noted that ‘Corrosive to Metals’ was not used in the EU system for supply prior to the adoption relatively recently of CLP, thus it is not surprising that very few substances have this harmonised classification in CLP. Moreover, it was also noted the problem mainly arises for mixtures which would not be listed in the CLP harmonised list.

### **PRO –**

- (i) No change for some countries who have implemented GHS Rev. 3.

### **CON –**

- (i) Doesn’t address the potential issues highlighted in INF.31(19th session) and ST/SG/AC.10/C.4/2010/7.

### **Option 6 - Proposed amendment to the GHS Rev. 4**

Delete the 3<sup>rd</sup> paragraph in 1.4.10.5.5 altogether and revert back to the 3<sup>rd</sup> revised edition of the GHS in this part.

Delete the Note below Table 2.16.2 in GHS 2.16.3.

## Annex 2

### Existing possible options for a permanent solution which the correspondence group agreed not to progress during the conference call on 10 May 2012:

#### Proposed modification 5a:

#### Option only to be used for substances and mixtures with definitive data to support that the substance or mixture is only classified corrosive to metal and not corrosive to skin or eyes.

If this option is to be progressed, it is suggested to use the exclamation mark symbol rather than no symbol. The use of a hazard pictogram is considered vital for hazard communication in instances where there may be a language or literacy barrier and it may also draw attention to the hazard statement.

#### PRO –

- (i) Hazard ‘Corrosive to Metals’ is communicated throughout the ‘supply & use’ sector including consumers.
- (ii) No need to tackle the difficulties with defining a ‘consumer sector’ – many products sold as consumer products are also used professionally and in the workplace. For instance, the same product may be sold to, and used by, both consumers and professional users in which case differentiated labelling would cause disharmonisation and confusion.
- (iii) Nothing changes for the transport sector i.e. the warning label for transport is retained and remains unchanged (GHS Annex 1 table would still show the transport pictogram).
- (iv) Pictogram appears on the label – important for communication in that it serves as a quick visible reminder that care is needed when handling the product.

#### CON –

- (i) Could lead to different labelling in different countries if progressed as a competent authority option.

#### Option 5a - Proposed amendment to the GHS Rev. 4

Replace the 3<sup>rd</sup> paragraph in 1.4.10.5.5 with the following text:

“Where a substance or mixture is classified as corrosive to metals but not corrosive to skin or eyes based on definitive supporting data, the competent authority may choose to allow the corrosion pictogram associated with ‘corrosive to metals’ to be replaced by the exclamation mark pictogram on the label of such substances and mixtures.”

The Note below Table 2.16.2 in GHS 2.16.3 remains in the text.

*Rationale for not progressing proposed modification 5a:*

- Requires definitive data to support that the substance/mixture is only classified corrosive to metal and not corrosive to skin or eyes.
- There is concern that the requirement for ‘definitive data’ may be inconsistent with the principles of GHS and may lead to additional testing e.g. animal data. Also the term ‘definitive data’ is not used/defined in GHS.

**Proposed modification 5c:****Permit omission of the corrosion pictogram arising from classification as *Corrosive to metals* where the container size is less than e.g. 5 litres (i.e. where limited quantity provisions in transport apply).**

This option is linked to option 5 and proposed as a possible compromise to address the concerns arising from the complete removal of the pictogram, including in the workplace sector where larger quantities may be supplied. A similar option was presented initially by AISE when it first raised the problem in document INF31 (19th session). If necessary this compromise option could include discretion for competent authorities to allow the corrosion pictogram associated with *Corrosive to metals* to be omitted for a specified limited quantity.

The ‘pros’ of this approach would be as now for option 5. The existing ‘con’ for option 5 (no pictogram on the label) would be mitigated such that this only applied for packages < 5 litres where the product is not also classified as Skin corrosion category 1 or Serious eye damage category 1. A potential further ‘con’ that this might open the way to other limited quantity exemptions for supply could be countered by making clear that this does not set a precedent.

If this compromise option finds favour, suitable text could be developed to make clear the limited circumstances in which the pictogram associated with *Corrosive to metals* could be omitted, the special circumstances that apply so this does not set a precedent to apply similar exemptions to other hazard classes, and to emphasise the need to include on the label the other pictograms that arise from classification of the substance or mixture in any other hazard class.

**PRO –**

- (i) Hazard “Corrosive to metals” is communicated throughout the ‘supply & use’ sector including consumers.
- (ii) No need to tackle the difficulties with defining a ‘consumer sector’ – many products sold as consumer products are also used professionally and in the workplace. For instance, the same product may be sold to, and used by, both consumers and professional users in which case differentiated labelling would cause disharmonisation and confusion.
- (iii) Nothing changes for the transport sector i.e. the warning label for transport is retained and remains unchanged (GHS Annex 1 table would still show the transport pictogram).
- (iv) Proposed labelling exemption would be consistent with limited quantity provisions in the transport legislation

**CON –**

- (i) No pictogram on the label – pictogram considered important for communication in that it serves as a quick visible reminder that need to take care when handling the product. However, would be mitigated such that this only applies for packages < 5 litres where the product is not also classified as Skin corrosion category 1 or Serious eye damage category 1.
- (ii) Might open the way to other limited quantity exemptions for supply. However, this could be countered by making clear that this does not set a precedent.
- (iii) Could lead to different labelling in different countries if progressed as a competent authority option.

**Option 5c - Proposed amendment to the GHS Rev. 4**

Replace the 3rd paragraph in 1.4.10.5.5 with the following text:

“Where a substance or mixture is classified as corrosive to metals but not corrosive to skin or eyes, the competent authority may choose to allow the corrosion pictogram associated with ‘corrosive to metals’ to omitted from the label of such substances and mixtures where justified and the contents of the immediate container are less than [5 litres / 5 kilograms].”

The Note below Table 2.16.2 in GHS 2.16.3 remains in the text.

*Rationale for not progressing proposed modification 5c*

- Proposal withdrawn due to concerns about introducing quantity exemptions.
-