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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  
Transport of Dangerous Goods

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

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Item 3 of the provisional agenda

**ISSUES RELATING TO THE GLOBALLY HARMONIZED SYSTEM OF  
CLASSIFICATION AND LABELLING OF CHEMICALS (GHS)**

Hazard communication issues: Pictogram for gases under pressure

Transmitted by the experts from Germany and the United Kingdom and  
the European Industrial Gases Association (EIGA)<sup>1</sup>

**Introduction**










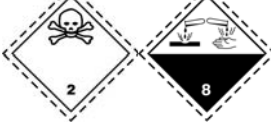
1. During the last meeting a proposal by EIGA to exempt packagings bearing a class 2 label in accordance with the Model Regulations from also bearing the GHS pictogram for gases under pressure was discussed (ST/SG/AC.10/C.4/2009/1). The proposal was not adopted but another proposal was made by the expert from Germany. The Sub-Committee of experts on the GHS (GHS Sub-Committee) invited the expert from EIGA and from Germany (and other experts interested in the subject) to present a revised proposal taking into account the comments received during the last meeting (see paragraph 31 of the report of the GHS Sub-Committee on its seventeenth session).

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<sup>1</sup> In accordance with ST/SG/AC.10/C.4/34, para. 31.

### Different meanings of the symbol "gas cylinder"

2. Under the GHS, for the purposes of supply and use, the symbol "gas cylinder" is applied to all gases under pressure regardless of their other properties such as flammability, oxidizing properties or health hazards.
3. For the transport of dangerous goods the symbol "gas cylinder" (gas cylinder on a green background with figure "2" in bottom corner) is applied only to non-flammable, non-toxic gases. Other gases have either a "flame" or a "skull with crossbones" as the symbol (and figure "2" in the bottom corner of the pictogram).
4. Examples that illustrate the assignment of pictograms under the GHS for supply and use and for the transport of dangerous goods are shown in the following table:

Gas	GHS pictogram(s) for supply and use	TDG pictogram(s)
Hydrogen		
Nitrogen		
Oxygen		
Fluorine		
Phosgene		

5. For transport a gas is indicated always by figure "2" at the bottom of the primary risk label (and only for non-flammable, non-toxic gases by the symbol "gas cylinder"). For supply and use a gas in general is indicated by a pictogram with the gas cylinder.

### General approach for the assignment of pictograms under the GHS

6. The GHS assigns pictograms to most categories but not to all. With regard to physical hazards no GHS-pictogram is assigned to the following hazard classes:

Explosives of division 1.5 and 1.6 and flammable gases of category 2

7. If the general idea was that a pictogram is not assigned only in those cases where a hazard category is considered to be "less hazardous", it could be questioned whether the pressure hazard of a gas under pressure is actually greater than for example its flammability hazard (when assigned to category 2 of flammable gases).

### Relation to transport

8. The approach of assigning a pictogram for the purposes of transport but not for the purposes of supply and use under the GHS is applied in other categories as well, namely for explosives of division 1.5 and 1.6.

### Proposal

9. Remove the pictogram "gas cylinder" for the purposes of supply and use from the GHS as shown in the following table in chapter 2.5:

**Table 2.5.2: Label elements for gases under pressure**

	Compressed gas	Liquefied gas	Refrigerated liquefied gas	Dissolved gas
<b>Symbol</b>	<i>No symbol</i> <del>Gas cylinder</del>	<i>No symbol</i> <del>Gas cylinder</del>	<i>No symbol</i> <del>Gas cylinder</del>	<i>No symbol</i> <del>Gas cylinder</del>
<b>Signal word</b>	Warning	Warning	Warning	Warning
<b>Hazard statement</b>	Contains gas under pressure; may explode if heated	Contains gas under pressure; may explode if heated	Contains refrigerated gas; may cause cryogenic burns or injury	Contains gas under pressure; may explode if heated

10. The following consequential amendments would result:

Chapter 2.5, Paragraph 2.5.4.1, Decision logic 2.5 for gases under pressure:  
Replace the symbol "gas cylinder" with "No symbol" (5 times)

















Annex 1, Table for Gases under pressure:  
Replace the pictogram "gas cylinder" with "No pictogram" (4 times)

Annex 2, A.2.5:  
Replace the symbol "gas cylinder" by "No symbol"

Annex 3, Gases under pressure:  
Replace the text "Gas cylinder" by "No symbol" and remove the symbol "gas cylinder" (2 times)

### Justification

11. For the purposes of supply and use the message that there is a gas under pressure is conveyed by the hazard statement. The following table shows the resulting labelling elements for hazard communication (only the hazard statements for "gas under pressure" are shown in this table):

Gas	GHS pictogram(s), signal word and hazard statement	TDG pictogram(s)
Hydrogen  compressed or refrigerated liquefied	 Danger  Contains gas under pressure; may explode if heated or Contains refrigerated gas; may cause cryogenic burns or injury	
Nitrogen  compressed or refrigerated liquefied	Warning  Contains gas under pressure; may explode if heated or Contains refrigerated gas; may cause cryogenic burns or injury	
Oxygen  compressed or refrigerated liquefied	 Danger  Contains gas under pressure; may explode if heated or Contains refrigerated gas; may cause cryogenic burns or injury	 
Fluorine  compressed	   Danger  Contains gas under pressure; may explode if heated	  
Phosgene  compressed	  Danger  Contains gas under pressure; may explode if heated	 

12. Removing the pictogram "gas cylinder" from the GHS for the purposes of supply and use would have the following advantages/consequences:

- (a) The number of pictograms to be applied is reduced;
- (b) The information about the pressure hazard is still communicated via the hazard statement;

- (c) The inconsistency with regard to the different meanings of the symbol "gas cylinder" under the GHS and TDG would be avoided;
  - (d) Transport is not affected and consistency with transport is maintained all the same.
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