



**Committee of Experts on the Transport of Dangerous Goods
and on the Globally Harmonized System of Classification
and Labelling of Chemicals**

**Report of the Committee of Experts on the Transport of
Dangerous Goods and on the Globally Harmonized System of
Classification and Labelling of Chemicals on its fifth session**

Held in Geneva on 10 December 2010

Addendum

Annex III

**List of amendments to the third revised edition of the Globally
Harmonized System of Classification and Labelling of Chemicals
(GHS) (ST/SG/AC.10/30/Rev.3)**

Chapter 1.2

Insert the following definition in the alphabetical order:

“*Chemically unstable gas* means a flammable gas that is able to react explosively even in the absence of air or oxygen.”.

Chapter 1.3

1.3.2.3 Insert “1.3.2.3.1” before the first paragraph (“The classification criteria...”) and amend the beginning of the second sentence to read: “For most hazard classes, the recommended process...”.

1.3.2.3.2 Insert a new paragraph 1.3.2.3.2 as follows:

“1.3.2.3.2 In most cases, it is not anticipated that reliable data for complete mixtures will be available for germ cell mutagenicity, carcinogenicity, and reproductive toxicity hazard classes. Therefore, for these hazard classes, mixtures will generally be classified based on the available information for the individual ingredients of the mixtures, using the cut-off values/concentration limit methods in each chapter. The classification may be modified on a case-by-case basis based on available test data for the complete mixture, if such data are conclusive as described in each chapter.”

Chapter 1.4

1.4.10.5.5 Insert the following new paragraph at the end of the existing text:

“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 as packaged for consumer use.”.

Chapter 2.1

2.1.2.1 (f) Delete “detonating”.

Chapter 2.2

Amend the heading of the Chapter to read as follows: “Flammable gases (including chemically unstable gases)”.

2.2.1 Amend the heading to read: “Definitions”.

The definition of “flammable gases” becomes new paragraph 2.2.1.1.

2.2.1.2 Insert a new definition to read as follows:

“2.2.1.2 A *chemically unstable gas* is a flammable gas that is able to react explosively even in the absence of air or oxygen.”

2.2.2 Insert “2.2.2.1” before the sentence preceding table 2.2.1.

2.2.2.2 Insert the following new paragraph after Note 2:

“2.2.2.2 A flammable gas that is also chemically unstable is additionally classified in one of the two categories for chemically unstable gases using the methods described in Part III of the Manual of Tests and Criteria according to the following table:

Table 2.2.2: Criteria for chemically unstable gases

| Category | Criteria |
|----------|---|
| A | Flammable gases which are chemically unstable at 20°C and a standard pressure of 101.3 kPa |
| B | Flammable gases which are chemically unstable at a temperature greater than 20°C and/or a pressure greater than 101.3 kPa |

2.2.3 Amend current table 2.2 to read as follows:

Table 2.2.3: Label elements for flammable gases (including chemically unstable gases)

| | Flammable gas | | Chemically unstable gas | |
|-------------------------|-------------------------|------------------|--|--|
| | Category 1 | Category 2 | Category A | Category B |
| Symbol | Flame | <i>No symbol</i> | <i>No additional symbol</i> | <i>No additional symbol</i> |
| Signal word | Danger | Warning | <i>No additional signal word</i> | <i>No additional signal word</i> |
| Hazard statement | Extremely flammable gas | Flammable gas | May react explosively even in the absence of air | May react explosively even in the absence of air at elevated pressure and/or temperature |

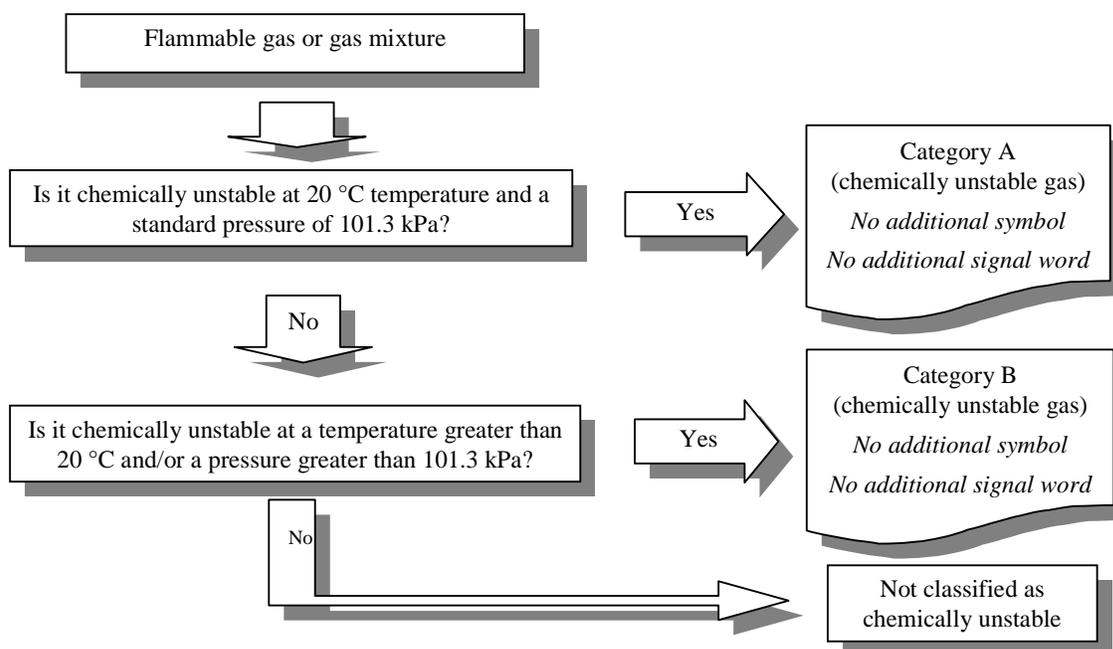
2.2.4.1 Amend the heading to read: “*Decision logic for flammable gases*”.

Current decision logic “2.2” becomes decision logic “2.2 (a)”.

2.2.4.2 Insert a new paragraph 2.2.4.2 and decision logic 2.2 (b) to read as follows:

“2.2.4.2 *Decision logic for chemically unstable gases*

To classify a flammable gas as chemically unstable, data on its chemical instability are required. The classification is according to decision logic 2.2 (b).

Decision logic 2.2 (b)

Current paragraph 2.2.4.2 (“Guidance”) becomes new paragraph 2.2.4.3.

2.2.4.3 (former 2.2.4.2) Replace “ISO 10156:1996” with “ISO 10156:2010”.

Insert the following new paragraph at the end of the existing text:

“Chemical instability should be determined in accordance with the method described in Part III of the Manual of Tests and Criteria. If the calculations in accordance with ISO 10156:2010 show that a gas mixture is not flammable it is not necessary to carry out the tests for determining chemical instability for classification purposes.”

2.2.5 (heading) Replace “ISO 10156:1996” with “ISO 10156:2010”.

Chapter 2.3

In the heading, delete “Flammable”.

2.3.2.1 Amend NOTE 2 to read:

“**NOTE 2:** Aerosols do not fall additionally within the scope of chapters 2.2 (flammable gases), 2.5 (gases under pressure), 2.6 (flammable liquids) and 2.7 (flammable solids). Depending on their contents, aerosols may however fall within the scope of other hazard classes, including their labelling elements.”

2.3.2.2 Amend the beginning of the first sentence to read: “An aerosol is classified in one of the three categories for this Class ...”.

Add a new sentence at the end of the paragraph to read:

“Aerosols which do not meet the criteria for inclusion in Category 1 or Category 2 (extremely flammable or flammable aerosols) should be classified in Category 3 (non-flammable aerosols)”.

Amend the note to read as follows:

“NOTE: Aerosols containing more than 1% flammable components or with a heat of combustion of at least 20 kJ/g, which are not submitted to the flammability classification procedures in this chapter, should be classified as aerosols, Category 1.”.

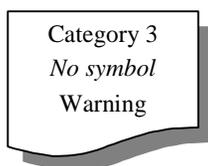
2.3.3 Insert a new column “Category 3” in Table 2.3.1 and amend to read:

“Table 2.3.1.: Label elements for flammable and non-flammable aerosols

| | Category 1 | Category 2 | Category 3 |
|-------------------------|--|--|---|
| Symbol | Flame | Flame | <i>No symbol</i> |
| Signal word | Danger | Warning | Warning |
| Hazard statement | Extremely flammable aerosol Pressurized container: May burst if heated | Flammable aerosol Pressurized container: May burst if heated | Pressurized container: May burst if heated |

2.3.4.1 Replace “To classify a flammable aerosol, data on” with “To classify an aerosol as a flammable aerosol, data on”.

2.3.4.1 In the three decision logics 2.3 (a) to 2.3 (c), replace all “Not classified” by:



Chapter 2.4

2.4.1 In the note, replace “ISO 10156:1996 or 10156–2:2005” with “ISO 10156:2010”.

2.4.4.1 Replace “ISO 10156:1996” with “ISO 10156:2010” and delete “and ISO 10156-2:2005 “Gas cylinders, Gases and gas mixtures. Part 2: Determination of oxidizing ability of toxic and corrosive gases and gas mixtures”.

2.4.4.2 Replace with the following:

“2.4.4.2 Guidance

Example of the classification of an oxidizing gas mixture by calculation according to ISO 10156:2010.

The classification method described in ISO 10156 uses the criterion that a gas mixture should be considered as more oxidising than air if the oxidising power of the gas mixture is higher than 0.235 (23.5%).

The oxidizing power (OP) is calculated as follows:

$$OP = \frac{\sum_{i=1}^n x_i C_i}{\sum_{i=1}^n x_i + \sum_{k=1}^p K_k B_k}$$

Where:

- x_i = molar fraction of the i :th oxidising gas in the mixture;
- C_i = coefficient of oxygen equivalency of the i :th oxidising gas in the mixture;
- K_k = coefficient of equivalency of the inert gas k compared to nitrogen;
- B_k = molar fraction of the k :th inert gas in the mixture;
- n = total number of oxidising gases in the mixture;
- p = total number of inert gases in the mixture;

Example mixture: 9% (O₂) + 16% (N₂O) + 75% (He)

Calculation steps

Step 1:

Ascertain the coefficient of oxygen equivalency (C_i) for the oxidising gases in the mixture and the nitrogen equivalency factors (K_k) for the non-flammable, non-oxidising gases.

- C_i (N₂O) = 0.6 (nitrous oxide)
- C_i (O₂) = 1 (oxygen)
- K_k (He) = 0.9 (helium)

Step 2:

Calculate the oxidising power of the gas mixture

$$OP = \frac{\sum_{i=1}^n x_i C_i}{\sum_{i=1}^n x_i + \sum_{k=1}^p K_k B_k} = \frac{0.09 \times 1 + 0.16 \times 0.6}{0.09 + 0.16 + 0.75 \times 0.9} = 0.201 \quad 20.1 < 23.5$$

Therefore the mixture is not considered as an oxidising gas.”.

Chapter 2.5

- 2.5.1 In the definition of gases under pressure, insert “at 20°C” after “or more”.
- 2.5.2 Insert “2.5.2.1” before the introductory sentence preceding table 2.5.1, and replace “Gases” with “Gases under pressure” in that sentence.

Add a new note at the end of the paragraph to read:

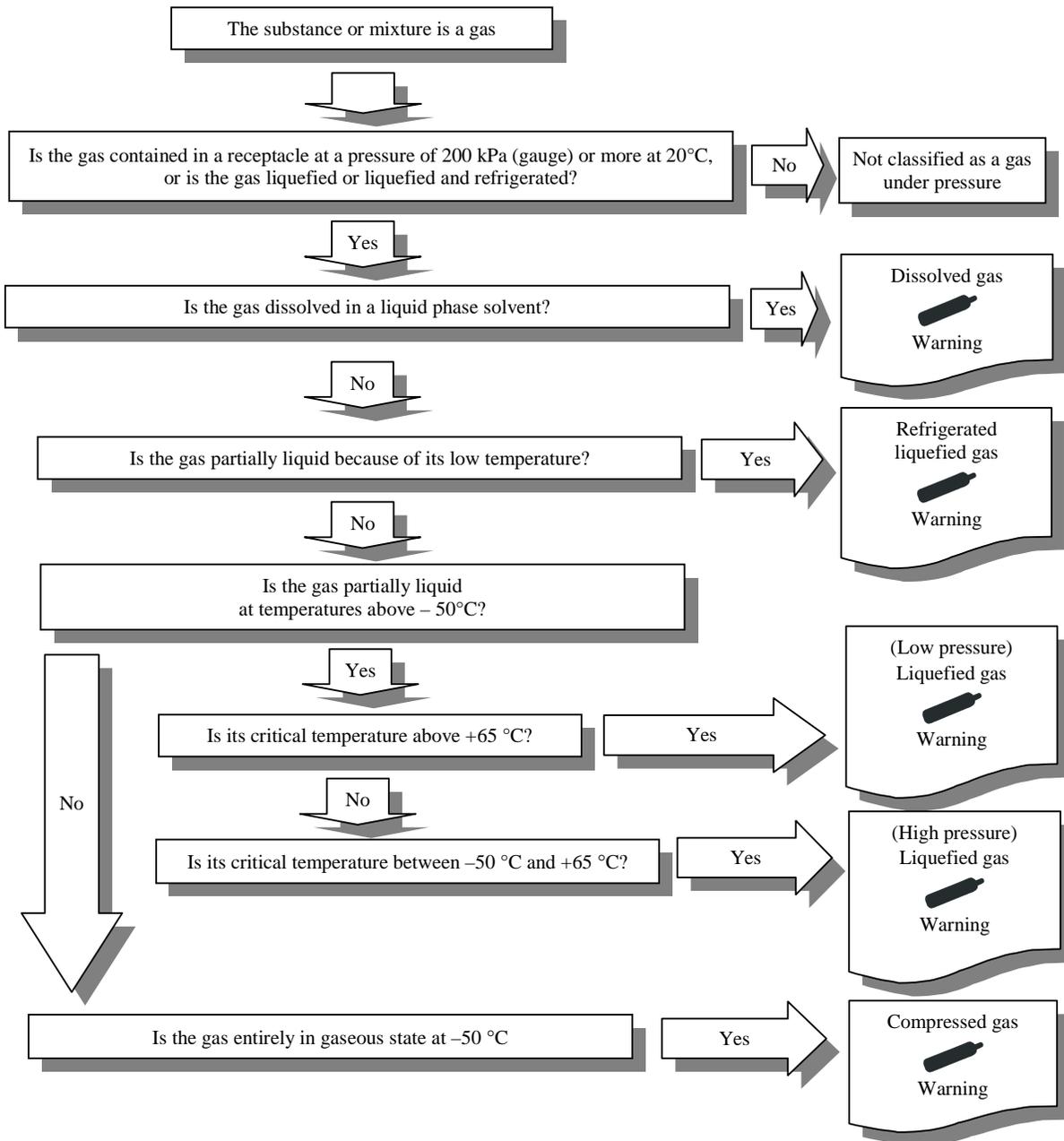
“**NOTE:** Aerosols should not be classified as gases under pressure. See Chapter 2.3.”

2.5.4.1 Replace with the following:

“2.5.4.1 Decision logic

Classification can be made according to decision logic 2.5

Decision logic 2.5 for gases under pressure



”

Chapter 2.16

2.16.3 Add the following note under table 2.16.2:

***NOTE:** Where a substance or mixture is classified as corrosive to metals but not corrosive to skin and/or eyes, some competent authorities may allow the labelling provisions described in 1.4.10.5.5.”*

Chapter 3.1

3.1.3.6.2.2 At the end of the second sentence, replace “unknown toxicity” with “unknown acute (oral/dermal/inhalation) toxicity”.

Add the following new third sentence at the end of the existing text:

“The competent authority can decide to specify that the additional statement(s) be communicated on the label or on the SDS or both, or to leave the choice of where to place the statement to the manufacturer/supplier.”

3.1.3.6.2.3 Insert “relevant” before “ingredient(s) with” (first two times) and delete “total” before “percentage”.

3.1.4 Insert “3.1.4.1” before the first paragraph (“General and specific considerations....”).

3.1.4.2 Insert a new paragraph 3.1.4.2 after the Note to Table 3.1.3 to read as follows:

“3.1.4.2 The acute toxicity hazard statements differentiate the hazard based on the route of exposure. Communication of acute toxicity classification should also reflect this differentiation. For example, acute oral toxicity Category 1, acute dermal toxicity Category 1 and acute inhalation toxicity Category 1. If a substance or mixture is classified for more than one route of exposure then all relevant classifications should be communicated on the safety data sheet as specified in Annex 4 and the relevant hazard communication elements included on the label as prescribed in 3.1.3.2. If the statement “x % of the mixture consists of ingredient(s) of unknown acute (oral/dermal/inhalation) toxicity” is communicated, as prescribed in 3.1.3.6.2.2, then it can also be differentiated based on the route of exposure. For example, “x % of the mixture consists of ingredient(s) of unknown acute oral toxicity” and “x % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.”

3.1.5.2 Amend footnote 3 to the decision logic to read as follows:

“In the event that an ingredient without any useable information is used in a mixture at a concentration $\geq 1\%$, the classification should be based on the ingredients with the known acute toxicity only, and additional statement(s) should identify the fact that x % of the mixture consists of ingredient(s) of unknown acute (oral/dermal/inhalation) toxicity. The competent authority can decide to specify that the additional statement(s) be communicated on the label or on the SDS or both, or to leave the choice of where to place the statement to the manufacturer/supplier.”

Chapter 3.5

3.5.3.3 Amend Table 3.5.1 to read as follows:

| Ingredient classified as: | Cut-off/concentration limits triggering classification of a mixture as: | | |
|---------------------------|---|-------------|--------------------|
| | Category 1 mutagen | | Category 2 mutagen |
| | Category 1A | Category 1B | |
| Category 1A mutagen | ≥ 0.1% | -- | -- |
| Category 1B mutagen | -- | ≥ 0.1% | -- |
| Category 2 mutagen | -- | -- | ≥ 1.0% |

3.5.4 Amend table 3.5.2 to read as follows:

| | Category 1 (Category 1A, 1B) | Category 2 |
|-------------------------|--|---|
| Symbol | Health hazard | Health hazard |
| Signal word | Danger | Warning |
| Hazard statement | May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |

Chapter 3.6

3.6.3.3 Amend table 3.6.1 to read as follows:

| Ingredient classified as: | Cut-off/concentration limits triggering classification of a mixture as: | | |
|---------------------------|---|-------------|-----------------------|
| | Category 1 carcinogen | | Category 2 carcinogen |
| | Category 1A | Category 1B | |
| Category 1A carcinogen | ≥ 0.1 % | -- | -- |
| Category 1B carcinogen | -- | ≥ 0.1 % | -- |
| Category 2 carcinogen | -- | -- | ≥ 0.1% (note 1) |
| | | | ≥ 1.0% (note 2) |

3.6.4 Amend table 3.6.2 as follows:

| | Category 1 (Category 1A, 1B) | Category 2 |
|-------------------------|--|--|
| Symbol | Health hazard | Health hazard |
| Signal word | Danger | Warning |
| Hazard statement | May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |

Chapter 3.7

3.7.3.3.2 Amend Table 3.7.1 to read as follows:

| Ingredient classified as: | Cut-off/concentration limits triggering classification of a mixture as: | | | |
|---|---|-----------------|----------------------------------|---|
| | Category 1 reproductive toxicant | | Category 2 reproductive toxicant | Additional category for effects on or via lactation |
| | Category 1A | Category 1B | | |
| Category 1A reproductive toxicant | ≥ 0.1% (note 1) | -- | -- | -- |
| | ≥ 0.3% (note 2) | | | |
| Category 1B reproductive toxicant | -- | ≥ 0.1% (note 1) | -- | -- |
| | | ≥ 0.3% (note 2) | | |
| Category 2 reproductive toxicant | -- | -- | ≥ 0.1% (note 3) | -- |
| | | | ≥ 3.0% (note 4) | |
| Additional category for effects on or via lactation | -- | -- | -- | ≥ 0.1% (note 1) |
| | | | | ≥ 0.3% (note 2) |

3.7.4 Amend Table 3.7.2 to read as follows:

| | Category 1 (Category 1A, 1B) | Category 2 | Additional category for effects on or via lactation |
|-------------------------|---|---|---|
| Symbol | Health hazard | Health hazard | <i>No symbol</i> |
| Signal word | Danger | Warning | <i>No signal word</i> |
| Hazard statement | May damage fertility or the unborn child (state specific effect if known)(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | Suspected of damaging fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | May cause harm to breast-fed children |

Chapter 4.1

4.1.3.6 Add the following sentence at the end of the existing paragraph:

“The competent authority can decide to specify that the additional statement is communicated on the label or on the SDS or both, or to leave the choice of where to place the statement to the manufacturer/supplier.”

4.1.5.1.1 In footnote 3 to the decision logic insert a new second sentence to read as follows:

“The competent authority can decide to specify that the additional statement be communicated on the label or on the SDS or both, or to leave the choice of where to place the statement to the manufacturer/supplier.”

4.1.5.2.4 In footnote 10 to the decision logic, insert the following sentence at the end of the existing text:

“The competent authority can decide to specify that the additional statement be communicated on the label or on the SDS or both, or to leave the choice of where to place the statement to the manufacturer/supplier.”

Annex 1

Amend the table for flammable gases to read as follows:

| FLAMMABLE GASES (INCLUDING CHEMICALLY UNSTABLE GASES) | | | | |
|--|--|--|--|--|
| Flammable gases | | Chemically unstable gases | | Note |
| Category 1 | Category 2 | Category A | Category B | |
|  Danger Extremely flammable gas | <p><i>No pictogram</i></p> <p>Warning</p> <p>Flammable gas</p> | <p><i>No additional pictogram</i></p> <p><i>No additional signal word</i></p> <p>May react explosively even in the absence of air</p> | <p><i>No additional pictogram</i></p> <p><i>No additional signal word</i></p> <p>May react explosively even in the absence of air at elevated pressure and/or temperature</p> | <p>Under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, the symbol, number and border line may be shown in black instead of white. The background colour stays red in both cases.</p> |
|  | <p>Not required under the UN Model Regulations</p> | | | |

Amend the table related to flammable aerosols to read as follows:

| AEROSOLS | | | |
|--|---|---|---|
| Category 1 | Category 2 | Category 3 | Note |
|  Danger Extremely flammable aerosol Pressurized container: May burst if heated |  Warning Flammable aerosol Pressurized container: May burst if heated | No pictogram Warning Pressurized container: May burst if heated | Under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, the symbol, number and border line may be shown in black instead of white. The background colour stays red in the first two cases, and green in the third case. |
|  |  |  | |

Annex 2

Table A2.2

In the heading replace “Flammable gases” with “Flammable gases (including chemically unstable gases)”, and amend the table to read as follows:

| Hazard category | Criteria | Hazard communication elements | |
|---|--|-------------------------------|---|
| 1 | Gases and gas mixtures, which at 20 °C and a standard pressure of 101.3 kPa: (a) are ignitable when in a mixture of 13% or less by volume in air; or (b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Extremely flammable gas |
| 2 | Gases or gas mixtures, other than those of Category 1, which, at 20 °C and a standard pressure of 101.3 kPa, have a flammable range while mixed in air | Symbol | <i>No symbol</i> |
| | | Signal word | Warning |
| | | Hazard statement | Flammable gas |
| A (chemically unstable gases) | Flammable gases which are chemically unstable at 20 °C and a standard pressure of 101.3 kPa | Symbol | <i>No additional symbol</i> |
| | | Signal word | <i>No additional signal word</i> |
| | | Hazard statement | May react explosively even in the absence of air |

| Hazard category | Criteria | Hazard communication elements | |
|---|--|-------------------------------|--|
| B (chemically unstable gases) | Flammable gases which are chemically unstable at a temperature greater than 20 °C and/or a pressure greater than 101.3 kPa | Symbol | <i>No additional symbol</i> |
| | | Signal word | <i>No additional signal word</i> |
| | | Hazard statement | May react explosively even in the absence of air at elevated pressure and/or temperature |

Table A2.3

In the heading delete “Flammable”, and amend the table to read as follows:

| Hazard category | Criteria | Hazard communication elements | |
|-----------------|--|-------------------------------|---|
| 1 | On the basis of its ingredients, of its chemical heat of combustion and, if applicable, of the results of the foam test (for foam aerosols), and of the ignition distance test and enclosed space test, (for spray aerosols) (see decision logic in 2.3.4.1 of Chapter 2.3) | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Extremely flammable aerosol Pressurized container: May burst if heated |
| 2 | On the basis of its ingredients, of its chemical heat of combustion and, if applicable, of the results of the foam test (for foam aerosols), and of the ignition distance test and enclosed space test, (for spray aerosols) (see decision logic in 2.3.4.1 of Chapter 2.3) | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Flammable aerosol Pressurized container: May burst if heated |
| 3 | On the basis of its ingredients, of its chemical heat of combustion and, if applicable, of the results of the foam test (for foam aerosols), and of the ignition distance test and enclosed space test, (for spray aerosols) (see decision logic in 2.3.4.1 of Chapter 2.3). | Symbol | <i>No symbol</i> |
| | | Signal word | Warning |
| | | Hazard statement | Pressurized container: May burst if heated |

Annex 3

Section 1, Table A3.1.1: Hazard statement codes for physical hazards

Amend rows “H222” and “H223” to read as follows:

| Code (1) | Physical hazard statements (2) | Hazard class (GHS chapter) (3) | Hazard category (4) |
|-------------|------------------------------------|-----------------------------------|------------------------|
| H222 | Extremely flammable aerosol | Aerosols (chapter 2.3) | 1 |
| H223 | Flammable aerosol | Aerosols (chapter 2.3) | 2 |

Insert the following new rows:

| Code (1) | Physical hazard statements (2) | Hazard class (GHS chapter) (3) | Hazard category (4) |
|-------------|---|---|----------------------------------|
| H229 | Pressurized container: May burst if heated | Aerosols (chapter 2.3) | 1, 2, 3 |
| H230 | May react explosively even in the absence of air | Flammable gases (including chemically unstable gases) (chapter 2.2) | A (Chemically unstable gases) |
| H231 | May react explosively even in the absence of air at elevated pressure and/or temperature | Flammable gases (including chemically unstable gases) (chapter 2.2) | B (Chemically unstable gases) |

Section 2

A3.2.3.7 Insert a new paragraph A3.2.3.7 to read as follows:

“Where square brackets [...] appear around some text in a precautionary statement, this indicates that the text in square brackets 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). For example, P284 states: “[**In case of inadequate ventilation wear respiratory protection.**]” This statement is given with the condition for use “– *text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use*”. The application of the condition for use should be interpreted as follows: If additional information is provided with the chemical explaining what type of ventilation would be adequate for safe use, the text in square brackets may be used. In this case, the statement would read: “[**In case of inadequate ventilation wear respiratory protection.**]” However, if the chemical is supplied without such information, the text in square brackets should not be used, and the precautionary statement should read: “[**Wear respiratory protection.**]”

Current paragraph “A3.2.3.7” becomes new paragraph “A3.2.3.8”.

A3.2.3.8 (former A3.2.3.7) In the first sentence insert “or parts of sentences” after “individual sentences”.

Table A3.2.2: Amend the following precautionary statements as follows:

| Code | Prevention precautionary statements | Hazard class | Hazard category | Conditions for use |
|-------------|--|---|-------------------------------------|---|
| (1) | (2) | (3) | (4) | (5) |
| P202 | Do not handle until all safety precautions have been read and understood. | Explosives (chapter 2.1) | Unstable explosive | |
| | | Germ cell mutagenicity (chapter 3.5) | 1A, 1B, 2 | |
| | | Carcinogenicity (chapter 3.6) | 1A, 1B, 2 | |
| | | Reproductive toxicity (chapter 3.7) | 1A, 1B, 2 | |
| | | Flammable gases (including chemically unstable gases) (chapter 2.2) | A, B (chemically unstable gases) | |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. –No smoking. | Aerosols (chapter 2.3) | 1, 2, 3 | Manufacturers/supplier or the competent authority to specify applicable ignition source(s) |
| P211 | Do not spray on an open flame or other ignition source. | Aerosols (chapter 2.3) | 1, 2 | |
| P223 | Do not allow contact with water. | Substances and mixtures which, in contact with water, emit flammable gases (chapter 2.12) | 1, 2 | |
| P244 | Keep valves and fittings free from oil and grease. | Oxidizing gases (chapter 2.4) | 1 | |
| P251 | Do not pierce or burn, even after use. | Aerosols (chapter 2.3) | 1, 2, 3 | |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. | Acute toxicity – inhalation (chapter 3.1) | 3, 4 | Manufacturer/supplier or the competent authority to specify applicable conditions. <i>- may be omitted if P260 is given on the label</i> |
| | | Respiratory sensitization (chapter 3.4) | 1, 1A, 1B | |
| | | Skin sensitization (chapter 3.4) | 1, 1A, 1B | |
| | | Specific target organ toxicity, single exposure; respiratory tract irritation (chapter 3.8) | 3 | |
| | | Specific target organ toxicity, single exposure; narcotic effects (chapter 3.8) | 3 | |

| Code (1) | Prevention precautionary statements (2) | Hazard class (3) | Hazard category (4) | Conditions for use (5) |
|----------------------------------|---|---|---|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. | Explosives (chapter 2.1) | Unstable explosives and Divisions 1.1, 1.2, 1.3, 1.4, 1.5 | - <i>Specify face protection.</i> Manufacturer/supplier or the competent authority to specify type of equipment. |
| | | Flammable liquids (chapter 2.6) | 1, 2, 3, 4 | - <i>Specify protective gloves and eye/face protection.</i> Manufacturer/supplier or the competent authority to specify type of equipment. |
| | | Flammable solids (chapter 2.7) | 1, 2 | |
| | | Self-reactive substances and mixtures (chapter 2.8) | Types A, B, C, D, E, F | |
| | | Pyrophoric liquids (chapter 2.9) | 1 | |
| | | Pyrophoric solids (chapter 2.10) | 1 | |
| | | Self-heating substances and mixtures (chapter 2.11) | 1, 2 | |
| | | Substances and mixtures which, in contact with water, emit flammable gases (chapter 2.12) | 1, 2, 3 | |
| | | Oxidizing liquids (chapter 2.13) | 1, 2, 3 | |
| | | Oxidizing solids (chapter 2.14) | 1, 2, 3 | |
| | | Organic peroxides (chapter 2.15) | Types A, B, C, D, E, F | |
| | | Acute toxicity – dermal (chapter 3.1) | 1, 2, 3, 4 | - <i>Specify protective gloves/clothing.</i> Manufacturer/supplier or the competent authority to specify type of equipment. |
| | | Skin corrosion (chapter 3.2) | 1A, 1B, 1C | - <i>Specify protective gloves/clothing and eye/face protection.</i> Manufacturer/supplier or the competent authority to specify type of equipment. |
| | | Skin irritation (chapter 3.2) | 2 | - <i>Specify protective gloves.</i> |
| Skin sensitization (chapter 3.4) | 1, 1A, 1B | Manufacturer/supplier or the competent authority to specify type of equipment. | | |

| Code (1) | Prevention precautionary statements (2) | Hazard class (3) | Hazard category (4) | Conditions for use (5) |
|--------------------------------|---|--|--------------------------------------|---|
| <i>P280</i> <i>(Cont'd)</i> | Wear protective gloves/protective clothing/eye protection/face protection. | Severe eye damage (chapter 3.3) | 1 | - <i>Specify eye/face protection.</i> Manufacturer/supplier or the competent authority to specify type of equipment. |
| | | Eye irritation (chapter 3.3) | 2A | |
| | | Germ cell mutagenicity (chapter 3.5) | 1A, 1B, 2 | Manufacturer/supplier or the competent authority to specify type of equipment. |
| | | Carcinogenicity (chapter 3.6) | 1A, 1B, 2 | |
| | | Reproductive toxicity (chapter 3.7) | 1A, 1B, 2 | |
| P284 | [In case of inadequate ventilation] wear respiratory protection. | Acute toxicity, inhalation (chapter 3.1) | 1, 2 | Manufacturer/supplier or the competent authority to specify equipment. <i>- text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use.</i> |
| | | Respiratory sensitization (chapter 3.4) | 1, 1A, 1B | |

Table A3.2.3: Codification of response precautionary statements

| Code (1) | Response precautionary statements (2) | Hazard class (3) | Hazard category (4) | Conditions for use (5) |
|-------------|--|---|------------------------|--|
| P308 | IF exposed or concerned: | Germ cell mutagenicity (chapter 3.5) | 1A, 1B, 2 | |
| | | Carcinogenicity (chapter 3.6) | 1A, 1B, 2 | |
| | | Reproductive toxicity (chapter 3.7) | 1A, 1B, 2 | |
| | | Reproductive toxicity, effects on or via lactation (chapter 3.7) | Additional category | |
| | | Specific target organ toxicity, single exposure (chapter 3.8) | 1, 2 | |
| P310 | Immediately call a POISON CENTER/doctor/... | Acute toxicity, oral (chapter 3.1) | 1, 2, 3 | ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. |
| | | Acute toxicity, dermal (chapter 3.1) | 1, 2 | |
| | | Acute toxicity, inhalation (chapter 3.1) | 1, 2 | |
| | | Skin corrosion (chapter 3.2) | 1A, 1B, 1C | |
| | | Severe eye damage (chapter 3.3) | 1 | |
| | | Aspiration hazard (chapter 3.10) | 1, 2 | |
| P311 | Call a POISON CENTER/doctor/... | Acute toxicity, inhalation (chapter 3.1) | 3 | ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. |
| | | Respiratory sensitization (chapter 3.4) | 1, 1A, 1B | |
| | | Specific target organ toxicity, single exposure (chapter 3.8) | 1, 2 | |
| P312 | Call a POISON CENTER/doctor/.../if you feel unwell. | Acute toxicity, oral (chapter 3.1) | 4 | ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. |
| | | Acute toxicity, oral (chapter 3.1) | 5 | |
| | | Acute toxicity, dermal (chapter 3.1) | 3, 4, 5 | |
| | | Acute toxicity, inhalation (chapter 3.1) | 4 | |
| | | Acute toxicity, inhalation (chapter 3.1) | 5 | |
| | | Specific target organ toxicity, single exposure; respiratory tract irritation (chapter 3.8) | 3 | |
| | | Specific target organ toxicity, single exposure; narcotic effects (chapter 3.8) | 3 | |

| Code (1) | Response precautionary statements (2) | Hazard class (3) | Hazard category (4) | Conditions for use (5) |
|---|---|--|---|---|
| P321 | Specific treatment (see ... on this label). | Acute toxicity, oral (chapter 3.1) | 1, 2, 3 | ... Reference to supplemental first aid instruction. - <i>if immediate administration of antidote is required.</i> |
| Acute toxicity, dermal (chapter 3.1) | | 1, 2, 3, 4 | ... Reference to supplemental first aid instruction. - <i>if immediate measures such as specific cleansing agent is advised.</i> | |
| Acute toxicity, inhalation (chapter 3.1) | | 3 | ... Reference to supplemental first aid instruction. - <i>if immediate specific measures are required.</i> | |
| Skin corrosion (chapter 3.2) | | 1A, 1B, 1C | ... Reference to supplemental first aid instruction. - <i>manufacturer/supplier or competent authority may specify a cleansing agent if appropriate.</i> | |
| Skin irritation (chapter 3.2) | | 2 | | |
| Skin sensitization (chapter 3.4) | | 1, 1A, 1B | | |
| Specific target organ toxicity, single exposure (chapter 3.8) | | 1 | ... Reference to supplemental first aid instruction. - <i>if immediate measures are required.</i> | |
| P340 | Remove person to fresh air and keep comfortable for breathing. | Acute toxicity, inhalation (chapter 3.1) | 1, 2, 3, 4 | |
| Skin corrosion (chapter 3.2) | | 1A, 1B, 1C | | |
| Respiratory sensitization (chapter 3.4) | | 1, 1A, 1B | | |
| Specific target organ toxicity, single exposure; respiratory tract irritation (chapter 3.8) | | 3 | | |
| Specific target organ toxicity, single exposure; narcotic effects (chapter 3.8) | | 3 | | |

| Code (1) | Response precautionary statements (2) | Hazard class (3) | Hazard category (4) | Conditions for use (5) |
|-------------|--|---|------------------------|---|
| P352 | Wash with plenty of water/... | Acute toxicity, dermal (chapter 3.1) | 1, 2, 3, 4 | ...Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. |
| | | Skin irritation (chapter 3.2) | 2 | |
| | | Skin sensitization (chapter 3.4) | 1, 1A, 1B | |
| P361 | Take off immediately all contaminated clothing. | Flammable liquids (chapter 2.6) | 1, 2, 3 | |
| | | Acute toxicity, dermal (chapter 3.1) | 1, 2, 3 | |
| | | Skin corrosion (chapter 3.2) | 1A, 1B, 1C | |
| P362 | Take off contaminated clothing. | Acute toxicity, dermal (chapter 3.1) | 4 | |
| | | Skin irritation (chapter 3.2) | 2 | |
| | | Skin sensitization (chapter 3.4) | 1, 1A, 1B | |
| P363 | Wash contaminated clothing before reuse. | Skin corrosion (chapter 3.2) | 1A, 1B, 1C | |
| P364 | And wash it before reuse. | Acute toxicity, dermal (chapter 3.1) | 1, 2, 3, 4 | |
| | | Skin irritation (chapter 3.2) | 2 | |
| | | Skin sensitization (chapter 3.4) | 1, 1A, 1B | |
| P378 | Use ... to extinguish. | Flammable liquids (chapter 2.6) | 1, 2, 3, 4 | ... Manufacturer/supplier or the competent authority to specify appropriate media - <i>if water increases risk.</i> |
| | | Flammable solids (chapter 2.7) | 1, 2 | |
| | | Self-reactive substances and mixtures (chapter 2.8) | Types A, B, C, D, E, F | |
| | | Pyrophoric liquids (chapter 2.9) | 1 | |
| | | Pyrophoric solids (chapter 2.10) | 1 | |
| | | Substances and mixtures which, in contact with water, emit flammable gases (chapter 2.12) | 1, 2, 3 | |
| | | Oxidizing liquids (chapter 2.13) | 1, 2, 3 | |
| | | Oxidizing solids (chapter 2.14) | 1, 2, 3 | |

| Code (1) | Response precautionary statements (2) | Hazard class (3) | Hazard category (4) | Conditions for use (5) |
|--------------------------------|--|---|--------------------------------------|---|
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER/doctor/... | Acute toxicity, oral (chapter 3.1) | 1, 2, 3 | ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. |
| | | Aspiration hazard (chapter 3.10) | 1, 2 | |
| P301 + P312 | IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell. | Acute toxicity, oral (chapter 3.1) | 4 | ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. |
| P302 + P352 | IF ON SKIN: Wash with plenty of water/.... | Acute toxicity, dermal (chapter 3.1) | 1, 2, 3, 4 | ...Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. |
| | | Skin irritation (chapter 3.2) | 2 | |
| | | Skin sensitization (chapter 3.4) | 1, 1A, 1B | |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. | Flammable liquids (chapter 2.6) | 1, 2, 3 | |
| | | Skin corrosion (chapter 3.2) | 1A, 1B, 1C | |
| P304 + P312 | IF INHALED: Call a POISON CENTER/doctor/.../if you feel unwell. | Acute toxicity, inhalation (chapter 3.1) | 5 | ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. | Acute toxicity, inhalation (chapter 3.1) | 1, 2, 3, 4 | |
| | | Skin corrosion (chapter 3.2) | 1A, 1B, 1C | |
| | | Respiratory sensitization (chapter 3.4) | 1, 1A, 1B | |
| | | Specific target organ toxicity, single exposure; respiratory tract irritation (chapter 3.8) | 3 | |
| | | Specific target organ toxicity, single exposure; narcotic effects (chapter 3.8) | 3 | |

| Code (1) | Response precautionary statements (2) | Hazard class (3) | Hazard category (4) | Conditions for use (5) |
|-------------------|---|---|------------------------|---|
| P308 + P311 | IF exposed or concerned: Call a POISON CENTER/doctor/... | Specific target organ toxicity, single exposure (chapter 3.8) | 1, 2 | ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. |
| P332 + P313 | If skin irritation occurs: Get medical advice/attention. | Skin irritation (chapter 3.2) | 2, 3 | – <i>may be omitted when P333+P313 appears on the label</i> |
| P342 + P311 | If experiencing respiratory symptoms: Call a POISON CENTER/doctor/... | Respiratory sensitization (chapter 3.4) | 1, 1A, 1B | ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. |
| P361 + P364 | Take off immediately all contaminated clothing and wash it before reuse. | Acute toxicity, dermal (chapter 3.1) | 1, 2, 3 | |
| P362 + P364 | Take off contaminated clothing and wash it before reuse. | Acute toxicity, dermal (chapter 3.1) | 4 | |
| | | Skin irritation (chapter 3.2) | 2 | |
| | | Skin sensitization (chapter 3.4) | 1, 1A, 1B | |
| P370 + P378 | In case of fire: Use ... to extinguish. | Flammable liquids (chapter 2.6) | 1, 2, 3, 4 | ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i> |
| | | Flammable solids (chapter 2.7) | 1, 2 | |
| | | Self-reactive substances and mixtures (chapter 2.8) | Types A, B, C, D, E, F | |
| | | Pyrophoric liquids (chapter 2.9) | 1 | |
| | | Pyrophoric solids (chapter 2.10) | 1 | |
| | | Substances and mixtures which, in contact with water, emit flammable gases (chapter 2.12) | 1, 2, 3 | |
| | | Oxidizing liquids (chapter 2.13) | 1, 2, 3 | |
| | | Oxidizing solids (chapter 2.14) | 1, 2, 3 | |

Table A3.2.4: Codification of storage precautionary statements

| Code (1) | Prevention precautionary statements (2) | Hazard class (3) | Hazard category (4) | Conditions of use (5) |
|---------------------|---|---|--|--|
| P410 | Protect from sunlight. | Aerosols (chapter 2.3) | 1, 2, 3 | |
| | | Gases under pressure (chapter 2.5) | Compressed gas Liquefied gas Dissolved gas | <i>- may be omitted for gases filled in transportable gas cylinders in accordance with packing instruction P200 of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, unless those gases are subject to (slow) decomposition or polymerisation, or the competent authority provides otherwise.</i> |
| | | Self-heating substances and mixtures (chapter 2.11) | 1, 2 | |
| | | Organic peroxides (chapter 2.15) | Types A, B, C, D, E, F | |
| P412 | Do not expose to temperatures exceeding 50°C/122°F. | Aerosols (chapter 2.3) | 1, 2, 3 | |
| P410 + P403 | Protect from sunlight. Store in a well-ventilated place. | Gases under pressure (chapter 2.5) | Compressed gas Liquefied gas Dissolved gas | <i>- may be omitted for gases filled in transportable gas cylinders in accordance with packing instruction P200 of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, unless those gases are subject to (slow) decomposition or polymerisation, or the competent authority provides otherwise.</i> |
| P410 + P412 | Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. | Aerosols (chapter 2.3) | 1, 2, 3 | |

Annex 3: Section 3 “Use of precautionary statements”

A3.3.5 Amend the matrix applicable to the hazard classes and categories hereafter to read as follows:

EXPLOSIVES (Chapter 2.1)

| | | | |
|------------------------|--------------------|-------------------------|--|
| Hazard category | Signal word | Hazard statement | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> Symbol Exploding bomb </div>  |
| Unstable explosive | Danger | H200 Unstable explosive | |

| Precautionary statements | | | |
|--|---|--|---|
| Prevention | Response | Storage | Disposal |
| P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P372 Explosion risk in case of fire. P373 DO NOT fight fire when fire reaches explosives. P380 Evacuate area. | P401 Storein accordance with local/regional/national/international regulations (to be specified). | P501 Dispose of contents/container toin accordance with local/regional/national/international regulations (to be specified). |

FLAMMABLE GASES (INCLUDING CHEMICALLY UNSTABLE GASES)

(Chapter 2.2)

(Flammable gases)

| |
|------------------------|
| Symbol Flame |
|------------------------|

Hazard category

1

Signal word

Danger

Hazard statement

H220 Extremely flammable gas



| Precautionary statements | | | |
|--|---|--|----------|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Manufacturer/supplier or competent authority to specify applicable ignition source(s). | P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely. P381 Eliminate all ignition sources if safe to do so. | P403 Store in well-ventilated place. | |

FLAMMABLE GASES (INCLUDING CHEMICALLY UNSTABLE GASES)

(Chapter 2.2)

(Flammable gases)

Symbol

No symbol

Hazard category

2

Signal word

Warning

Hazard statement

H221 Flammable gas

Precautionary statements

| Prevention | Response | Storage | Disposal |
|---|--|---|----------|
| <p>P210 Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s).</p> | <p>P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely. P381 Eliminate all ignition sources if safe to do so.</p> | <p>P403 Store in well-ventilated place.</p> | |

FLAMMABLE GASES (INCLUDING CHEMICALLY UNSTABLE GASES)

**(Chapter 2.2)
(Chemically unstable gases)**

| |
|--|
| Symbol <i>No additional symbol</i> |
|--|

| Hazard category | Signal word | Hazard statement | |
|------------------------|----------------------------------|-------------------------|--|
| A | <i>No additional signal word</i> | H230 | May react explosively even in the absence of air |
| B | <i>No additional signal word</i> | H231 | May react explosively even in the absence of air at elevated pressure and/or temperature |

| Precautionary statements | | | |
|--|-----------------|----------------|-----------------|
| Prevention | Response | Storage | Disposal |
| P202 Do not handle until all safety precautions have been read and understood. | | | |

Note: This table lists only the precautionary statement that is assigned due to the chemical instability of the gas. For the other precautionary statements that are assigned based on the flammability see the respective tables for flammable gases.

AEROSOLS
(Chapter 2.3)

Symbol
Flame



| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|---|
| 1 | Danger | H222 Extremely flammable aerosol H229 Pressurized container: May burst if heated |
| 2 | Warning | H223 Flammable aerosol H229 Pressurized container: May burst if heated |

| Precautionary statements | | | |
|---|----------|--|----------|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. | | P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. | |

AEROSOLS
(Chapter 2.3)

| |
|-----------------------------------|
| Symbol <i>No symbol</i> |
|-----------------------------------|

| | | |
|------------------------|--------------------|---|
| Hazard category | Signal word | Hazard statement |
| 3 | Warning | H229 Pressurized container: May burst if heated |

| Precautionary statements | | | |
|---|----------|--|----------|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). P251 Do not pierce or burn, even after use. | | P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. | |

OXIDIZING GASES

(Chapter 2.4)

| |
|---|
| <p align="center">Symbol Flame over circle</p> |
|---|

| | | | |
|------------------------|--------------------|-------------------------|---------------------------------------|
| Hazard category | Signal word | Hazard statement | |
| 1 | Danger | H270 | May cause or intensify fire; oxidizer |



| Precautionary statements | | | |
|--|--|--|----------|
| Prevention | Response | Storage | Disposal |
| P220 Keep/Store away from clothing/.../combustible materials. ...Manufacturer/supplier or the competent authority to specify other incompatible materials. P244 Keep valves and fittings free from oil and grease. | P370 + P376 In case of fire: Stop leak if safe to do so. | P403 Store in well-ventilated place. | |

GASES UNDER PRESSURE
(Chapter 2.5)

| |
|-------------------------------|
| Symbol Gas cylinder |
|-------------------------------|

| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|---|
| Compressed gas | Warning | H280 Contains gas under pressure; may explode if heated |
| Liquefied gas | Warning | H280 Contains gas under pressure; may explode if heated |
| Dissolved gas | Warning | H280 Contains gas under pressure; may explode if heated |



| Precautionary statements | | | |
|--------------------------|----------|--|----------|
| Prevention | Response | Storage | Disposal |
| | | P410 + P403 Protect from sunlight. Store in a well-ventilated place. <i>- may be omitted for gases filled in transportable gas cylinders in accordance with packing instruction P200 of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, unless those gases are subject to (slow) decomposition or polymerisation, or the competent authority provides otherwise.</i> | |

FLAMMABLE LIQUIDS
(Chapter 2.6)

| |
|------------------------|
| Symbol Flame |
|------------------------|



| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|--|
| 1 | Danger | H224 Extremely flammable liquid and vapour |
| 2 | Danger | H225 Highly flammable liquid and vapour |
| 3 | Warning | H226 Flammable liquid and vapour |

| Precautionary statements | | | |
|---|--|--|---|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces.– No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). P233 Keep container tightly closed. P240 Ground/Bond container and receiving equipment <ul style="list-style-type: none"> - <i>if electrostatically sensitive material is for reloading.</i> - <i>if product is volatile so as to generate hazardous atmosphere.</i> P241 Use explosion-proof electrical/ventilating/lighting/.../equipment. ... Manufacturer/supplier or the competent authority to specify other equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P280 Wear protective gloves/eye protection/face protection Manufacturer/supplier or the competent authority to specify type of equipment. | P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P370 + P378 In case of fire: Use ... to extinguish. ... Manufacturer/supplier or the competent authority to specify appropriate media. <ul style="list-style-type: none"> - <i>if water increases risk.</i> | P403 + P235 Store in a well-ventilated place. Keep cool. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

FLAMMABLE LIQUIDS
(Chapter 2.6)

| |
|-----------------------------------|
| Symbol <i>No symbol</i> |
|-----------------------------------|

| | | |
|------------------------|--------------------|-------------------------|
| Hazard category | Signal word | Hazard statement |
| 4 | Warning | H227 Combustible liquid |

| Precautionary statements | | | |
|--|--|--|---|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from flames and hot surfaces. – No smoking. P280 Wear protective gloves/eye protection/face protection Manufacturer/supplier or the competent authority to specify type of equipment. | P370 + P378 In case of fire: Use ... to extinguish. ... Manufacturer/supplier or the competent authority to specify appropriate media. <i>- if water increases risk.</i> | P403 + P235 Store in a well-ventilated place. Keep cool. | P501 Dispose of contents/container to... in accordance with local/regional/national/international regulations (to be specified). |

FLAMMABLE SOLIDS

(Chapter 2.7)

| |
|-----------------|
| Symbol Flame |
|-----------------|



| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|----------------------|
| 1 | Danger | H228 Flammable solid |
| 2 | Warning | H228 Flammable solid |

| Precautionary statements | | | |
|--|---|---------|----------|
| Prevention | Response | Storage | Disposal |
| <p>P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s).</p> <p>P240 Ground/Bond container and receiving equipment. - <i>if electrostatically sensitive material is for reloading.</i></p> <p>P241 Use explosion-proof electrical/ventilating/lighting/... /equipment. ... Manufacturer/supplier or the competent authority to specify other equipment. - <i>if dust clouds can occur.</i></p> <p>P280 Wear protective gloves/eye protection/face protection Manufacturer/supplier or the competent authority to specify type of equipment.</p> | <p>P370 + P378 In case of fire: Use ... to extinguish ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i></p> | | |

SELF-REACTIVE SUBSTANCES AND MIXTURES
(Chapter 2.8)

| |
|---------------------------------|
| Symbol Exploding bomb |
|---------------------------------|

| | | |
|------------------------|--------------------|-------------------------------------|
| Hazard category | Signal word | Hazard statement |
| Type A | Danger | H240 Heating may cause an explosion |



| Precautionary statements | | | |
|---|---|--|---|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier or the competent authority to specify other incompatible materials. P234 Keep only in original container. P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P370 + P378 In case of fire: Use ... to extinguish ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i> P370 + P380 + P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. | P403 + P235 Store in a well-ventilated place. Keep cool. P411 Store at temperatures not exceeding ...°C/...°F. ... Manufacturer/supplier or the competent authority to specify temperature. P420 Store away from other materials. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

SELF-REACTIVE SUBSTANCES AND MIXTURES

(Chapter 2.8)

| | | | |
|------------------------|--------------------|--|---|
| Hazard category | Signal word | Hazard statement | Symbol |
| Type B | Danger | H241 Heating may cause a fire or explosion | Explosion bomb and flame |
| | | |   |

| Precautionary statements | | | |
|---|--|---|---|
| Prevention | Response | Storage | Disposal |
| <p>P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s).</p> <p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier or the competent authority to specify other incompatible materials.</p> <p>P234 Keep only in original container.</p> <p>P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p> | <p>P370 + P378 In case of fire: Use ... to extinguish. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk</i></p> <p>P370 + P380 + P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.</p> | <p>P403 + P235 Store in a well-ventilated place. Keep cool.</p> <p>P411 Store at temperatures not exceeding ... °C/... °F. ... Manufacturer/supplier or the competent authority to specify temperature.</p> <p>P420 Store away from other materials.</p> | <p>P501 Dispose of contents/container to... ...in accordance with local/regional/national/international regulations (to be specified).</p> |

SELF-REACTIVE SUBSTANCES AND MIXTURES

(Chapter 2.8)

| |
|------------------------|
| Symbol Flame |
|------------------------|



| Hazard category | Signal word | Hazard statement |
|------------------------|--------------------|-------------------------------|
| Type C | Danger | H242 Heating may cause a fire |
| Type D | Danger | H242 Heating may cause a fire |
| Type E | Warning | H242 Heating may cause a fire |
| Type F | Warning | H242 Heating may cause a fire |

| Precautionary statements | | | |
|--|---|---|--|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). P220 Keep/Store away from clothing/.../combustible materials. ...Manufacturer/supplier or the competent authority to specify other incompatible materials. P234 Keep only in original container. P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P370 + P378 In case of fire: Use ... to extinguish ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i> | P403 + P235 Store in a well-ventilated place. Keep cool. P411 Store at temperatures not exceeding ...°C/...°F. ...Manufacturer/supplier or the competent authority to specify temperature. P420 Store away from other materials. | P501 Dispose of contents/container to... ...in accordance with local/regional/national/international regulations (to be specified). |

PYROPHORIC LIQUIDS

(Chapter 2.9)

| |
|-----------------|
| Symbol Flame |
|-----------------|

Hazard category

1

Signal word

Danger

Hazard statement

H250 Catches fire spontaneously if exposed to air



| Precautionary statements | | | |
|---|---|---|----------|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). P222 Do not allow contact with air. P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P302 + P334 IF ON SKIN: Immerse in cool water/wrap with wet bandages P370 + P378 In case of fire: Use ... to extinguish ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i> | P422 Store contents under Manufacturer/supplier or the competent authority to specify appropriate liquid or inert gas. | |

PYROPHORIC SOLIDS

(Chapter 2.10)

| |
|------------------------|
| Symbol Flame |
|------------------------|

| | | | |
|------------------------|--------------------|-------------------------|--|
| Hazard category | Signal word | Hazard statement | |
| 1 | Danger | H250 | Catches fire spontaneously if exposed to air |



| Precautionary statements | | | |
|--|---|--|----------|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). P222 Do not allow contact with air. P280 Wear protective gloves/eye protection/face protection Manufacturer/supplier or the competent authority to specify type of equipment. | P335 + P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. P370 + P378 In case of fire: Use ... to extinguish ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i> | P422 Store contents underManufacturer/supplier or the competent authority to specify appropriate liquid or inert gas. | |

SUBSTANCES AND MIXTURES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES
(Chapter 2.12)

Symbol
Flame

| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|---|
| 1 | Danger | H260 In contact with water releases flammable gases, which may ignite spontaneously |
| 2 | Danger | H261 In contact with water releases flammable gas |



| Precautionary statements | | | |
|--|--|--|--|
| Prevention | Response | Storage | Disposal |
| P223 Do not allow contact with water. P231 + P232 Handle under inert gas. Protect from moisture. P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P335 + P334 Brush off loose particles from skin and immerse in cool water/wrap in wet bandages. P370 + P378 In case of fire: Use ... to extinguish ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i> | P402 + P404 Store in a dry place. Store in a closed container. | P501 Dispose of contents/container to... ...in accordance with local/regional/national/international regulations (to be specified). |

SUBSTANCES AND MIXTURES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES
(Chapter 2.12)

| |
|------------------------|
| Symbol Flame |
|------------------------|

| | | |
|------------------------|--------------------|---|
| Hazard category | Signal word | Hazard statement |
| 3 | Warning | H261 In contact with water releases flammable gas |



| Precautionary statements | | | |
|---|--|--|---|
| Prevention | Response | Storage | Disposal |
| P231 + P232 Handle under inert gas. Protect from moisture. P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P370 + P378 In case of fire: Use ... to extinguish. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i> | P402 + P404 Store in a dry place. Store in a closed container. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

OXIDIZING LIQUIDS

(Chapter 2.13)

Hazard category

Signal word

Hazard statement

1

Danger

H271 May cause fire or explosion; strong oxidizer

Symbol

Flame over circle



| Precautionary statements | | | |
|---|---|---------|--|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat. P220 Keep/Store away from clothing and other combustible materials. P221 Take any precaution to avoid mixing with combustibles/... ... Manufacturer/supplier or the competent authority to specify other incompatible materials. P280 Wear protective gloves /eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. P283 Wear fire/flame resistant/retardant clothing. | P306 + P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. P370 + P378 In case of fire: Use ... to extinguish. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i> | | P501 Dispose of contents/container to... ...in accordance with local/regional/national/international regulations (to be specified). |

OXIDIZING LIQUIDS

(Chapter 2.13)

| |
|------------------------------------|
| Symbol Flame over circle |
|------------------------------------|



| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|-----------------------------------|
| 2 | Danger | H272 May intensify fire; oxidizer |
| 3 | Warning | H272 May intensify fire; oxidizer |

| Precautionary statements | | | |
|--|--|---------|--|
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat. P220 Keep/Store away from clothing/.../combustible materials. ...Manufacturer/supplier or the competent authority to specify other incompatible materials. P221 Take any precaution to avoid mixing with combustibles/... ... Manufacturer/supplier or the competent authority to specify other incompatible materials. P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P370 + P378 In case of fire: Use ... to extinguish. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i> | | P501 Dispose of contents/container to... ...in accordance with local/regional/national/international regulations (to be specified). |

OXIDIZING SOLIDS

(Chapter 2.14)

Hazard category

1

Signal word

Danger

Hazard statement

H271 May cause fire or explosion; strong oxidizer

| |
|---|
| <p align="center">Symbol Flame over circle</p> |
|---|



| Precautionary statements | | | |
|---|---|---------|---|
| Prevention | Response | Storage | Disposal |
| <p>P210 Keep away from heat.</p> <p>P220 Keep away from clothing and other combustible materials.</p> <p>P221 Take any precaution to avoid mixing with combustibles/... ...Manufacturer/supplier or the competent authority to specify other incompatible materials.</p> <p>P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p> <p>P283 Wear fire/flammable resistant/retardant clothing.</p> | <p>P306 + P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.</p> <p>P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.</p> <p>P370 + P378 In case of fire: Use ... to extinguish. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i></p> | | <p>P501 Dispose of contents/container to... ...in accordance with local/regional/national/international regulations (to be specified).</p> |

OXIDIZING SOLIDS

(Chapter 2.14)

| |
|--|
| <p>Symbol Flame over circle</p> |
|--|



| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|-----------------------------------|
| 2 | Danger | H272 May intensify fire; oxidizer |
| 3 | Warning | H272 May intensify fire; oxidizer |

| Precautionary statements | | | |
|--|--|---------|--|
| Prevention | Response | Storage | Disposal |
| <p>P210 Keep away from heat.</p> <p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier or the competent authority to specify incompatible materials.</p> <p>P221 Take any precaution to avoid mixing with combustibles/... ...Manufacturer/supplier or the competent authority to specify other incompatible materials.</p> <p>P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p> | <p>P370 + P378 In case of fire: Use ... to extinguish. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i></p> | | <p>P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified).</p> |

ACUTE TOXICITY - ORAL
(Chapter 3.1)

| |
|---------------------------------------|
| Symbol Skull and crossbones |
|---------------------------------------|



| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|-------------------------|
| 1 | Danger | H300 Fatal if swallowed |
| 2 | Danger | H300 Fatal if swallowed |

| Precautionary statements | | | |
|---|--|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| P264 Wash ...thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 Do not eat, drink or smoke when using this product. | P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. - <i>if immediate administration of antidote is required.</i> P330 Rinse mouth. | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

ACUTE TOXICITY - ORAL
(Chapter 3.1)

| |
|---------------------------------------|
| Symbol Skull and crossbones |
|---------------------------------------|

| | | |
|------------------------|--------------------|-------------------------|
| Hazard category | Signal word | Hazard statement |
| 3 | Danger | H301 Toxic if swallowed |



| Precautionary statements | | | |
|--|--|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| P264 Wash ... thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 Do not eat, drink or smoke when using this product. | P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. - <i>if immediate administration of antidote is required.</i> P330 Rinse mouth. | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

ACUTE TOXICITY - ORAL
(Chapter 3.1)

| | | | | | |
|---|--------------------|---------------------------|--|-----------------------------------|---|
| Hazard category | Signal word | Hazard statement | <table border="1"> <tr> <td align="center"> Symbol Exclamation mark </td> </tr> <tr> <td align="center">  </td> </tr> </table> | Symbol Exclamation mark |  |
| Symbol Exclamation mark | | | | | |
|  | | | | | |
| 4 | Warning | H302 Harmful if swallowed | | | |

| Precautionary statements | | | |
|--|--|---------|---|
| Prevention | Response | Storage | Disposal |
| P264 Wash ... thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 Do not eat, drink or smoke when using this product. | P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell. ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P330 Rinse mouth. | | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

ACUTE TOXICITY - ORAL
(Chapter 3.1)

| |
|-----------------------------------|
| Symbol <i>No symbol</i> |
|-----------------------------------|

| | | |
|------------------------|--------------------|-------------------------------------|
| Hazard category | Signal word | Hazard statement |
| 5 | Warning | H303 May be harmful if swallowed |

| Precautionary statements | | | |
|---------------------------------|--|----------------|-----------------|
| Prevention | Response | Storage | Disposal |
| | P312 Call a POISON CENTER/doctor/.../if you feel unwell. ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. | | |

ACUTE TOXICITY - DERMAL
(Chapter 3.1)

| |
|---------------------------------------|
| Symbol Skull and crossbones |
|---------------------------------------|



| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|---------------------------------|
| 1 | Danger | H310 Fatal in contact with skin |
| 2 | Danger | H310 Fatal in contact with skin |

| Precautionary statements | | | |
|---|---|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| P262 Do not get in eyes, on skin, or on clothing. P264 Wash ... thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing. Manufacturer/supplier or the competent authority to specify type of equipment. | P302 + P352 IF ON SKIN: Wash with plenty of water/... ...Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P310 Immediately call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. - <i>if immediate measures such as specific cleansing agent is advised.</i> P361 + P364 Take off immediately all contaminated clothing and wash it before reuse | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

ACUTE TOXICITY - DERMAL
(Chapter 3.1)

| |
|---------------------------------------|
| Symbol Skull and crossbones |
|---------------------------------------|

| | | |
|------------------------|--------------------|---------------------------------|
| Hazard category | Signal word | Hazard statement |
| 3 | Danger | H311 Toxic in contact with skin |



| Precautionary statements | | | |
|--|---|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| P280 Wear protective gloves/protective clothing. Manufacturer/supplier or the competent authority to specify type of equipment. | P302 + P352 IF ON SKIN: Wash with plenty of water/... ...Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P312 Call a POISON CENTER/doctor/.../if you feel unwell. ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. - <i>if immediate measures such as specific cleansing agent is advised.</i> P361 + P364 Take off immediately all contaminated clothing and wash it before reuse | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

ACUTE TOXICITY - DERMAL
(Chapter 3.1)

| |
|-----------------------------------|
| Symbol Exclamation mark |
|-----------------------------------|

| | | |
|------------------------|--------------------|-----------------------------------|
| Hazard category | Signal word | Hazard statement |
| 4 | Warning | H312 Harmful in contact with skin |



| Precautionary statements | | | |
|---|--|---------|---|
| Prevention | Response | Storage | Disposal |
| P280 Wear protective gloves/protective clothing Manufacturer/supplier or the competent authority to specify type of equipment. | P302 + P352 IF ON SKIN: Wash with plenty of water/... ...Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P312 Call a POISON CENTER/doctor/.../if you feel unwell. ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. - <i>if immediate measures such as specific cleansing agent is advised.</i> P362 + P364 Take off contaminated clothing and wash it before reuse. | | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

ACUTE TOXICITY - DERMAL
(Chapter 3.1)

| |
|-----------------------------------|
| Symbol <i>No symbol</i> |
|-----------------------------------|

| | | |
|------------------------|--------------------|--|
| Hazard category | Signal word | Hazard statement |
| 5 | Warning | H313 May be harmful in contact with skin |

| Precautionary statements | | | |
|--------------------------|--|---------|----------|
| Prevention | Response | Storage | Disposal |
| | P312 Call a POISON CENTER/doctor/.../if you feel unwell. ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. | | |

ACUTE TOXICITY - INHALATION

(Chapter 3.1)

| |
|--|
| <p align="center">Symbol Skull and crossbones</p> |
|--|

| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|-----------------------|
| 1 | Danger | H330 Fatal if inhaled |
| 2 | Danger | H330 Fatal if inhaled |



| Precautionary statements | | | |
|--|---|---|--|
| Prevention | Response | Storage | Disposal |
| <p>P260 Do not breathe dust/fume/gas/mist/vapours/spray. Manufacturer/supplier or the competent authority to specify applicable conditions.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P284 [In case of inadequate ventilation] wear respiratory protection. Manufacturer/supplier or the competent authority to specify equipment. <i>- text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use.</i></p> | <p>P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.</p> <p>P320 Specific treatment is urgent (see ... on this label) ... Reference to supplemental first aid instruction. <i>- if immediate administration of antidote is required.</i></p> | <p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed. <i>- if product is volatile as to generate hazardous atmosphere.</i></p> <p>P405 Store locked up.</p> | <p>P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified).</p> |

ACUTE TOXICITY - INHALATION
(Chapter 3.1)

| |
|---------------------------------------|
| Symbol Skull and crossbones |
|---------------------------------------|

| | | |
|------------------------|--------------------|-------------------------|
| Hazard category | Signal word | Hazard statement |
| 3 | Danger | H331 Toxic if inhaled |



| Precautionary statements | | | |
|---|--|--|--|
| Prevention | Response | Storage | Disposal |
| P261 Avoid breathing dust/fume/gas/mist/vapours/spray. Manufacturer/supplier or the competent authority to specify applicable conditions. <i>- may be omitted if P260 is given on the label</i> P271 Use only outdoors or in a well-ventilated area. | P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P311 Call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. <i>- if immediate specific measures are required.</i> | P403 + P233 Store in a well-ventilated place. Keep container tightly closed. <i>- if product is volatile so as to generate hazardous atmosphere.</i> P405 Store locked up. | P501 Dispose of content/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

ACUTE TOXICITY - INHALATION
(Chapter 3.1)

| |
|-----------------------------------|
| Symbol Exclamation mark |
|-----------------------------------|



| | | |
|------------------------|--------------------|-------------------------|
| Hazard category | Signal word | Hazard statement |
| 4 | Warning | H332 Harmful if inhaled |

| Precautionary statements | | | |
|---|--|---------|----------|
| Prevention | Response | Storage | Disposal |
| P261 Avoid breathing dust/fume/gas/mist/vapours/spray. Manufacturer/supplier or the competent authority to specify applicable conditions. <i>- may be omitted if P260 is given on the label</i> P271 Use only outdoors or in a well-ventilated area. | P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/doctor/.../if you feel unwell. ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. | | |

ACUTE TOXICITY - INHALATION
(Chapter 3.1)

| |
|-----------------------------------|
| Symbol <i>No symbol</i> |
|-----------------------------------|

| | | |
|------------------------|--------------------|--------------------------------|
| Hazard category | Signal word | Hazard statement |
| 5 | Warning | H333 May be harmful if inhaled |

| Precautionary statements | | | |
|--------------------------|---|---------|----------|
| Prevention | Response | Storage | Disposal |
| | P304 + P312 IF INHALED: Call a POISON CENTER/doctor/.../if you feel unwell. ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. | | |

SKIN CORROSION/IRRITATION

(Chapter 3.2)

Hazard category

1A to 1C

Signal word

Danger

Hazard statement

H314 Causes severe skin burns and eye damage

Symbol

Corrosion



| Precautionary statements | | | |
|--|--|---|--|
| Prevention | Response | Storage | Disposal |
| <p>P260 Do not breathe dusts or mists. <i>- if inhalable particles of dusts or mists may occur during use.</i></p> <p>P264 Wash ...thoroughly after handling. ...Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p> | <p>P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.</p> <p>P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. <i>- Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate.</i></p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> | <p>P405 Store locked up.</p> | <p>P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified).</p> |

SKIN CORROSION/IRRITATION
(Chapter 3.2)

| |
|-----------------------------------|
| Symbol Exclamation mark |
|-----------------------------------|

| | | |
|------------------------|--------------------|-----------------------------|
| Hazard category | Signal word | Hazard statement |
| 2 | Warning | H315 Causes skin irritation |



| Precautionary statements | | | |
|--|---|---------|----------|
| Prevention | Response | Storage | Disposal |
| P264 Wash ... thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P280 Wear protective gloves. Manufacturer/supplier or the competent authority to specify type of equipment. | P302 + P352 IF ON SKIN: Wash with plenty of water/... ...Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. <i>- Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate.</i> P332 + P313 If skin irritation occurs: Get medical advice/attention. <i>- may be omitted when P333+P313 appears on the label</i> P362+P364 Take off contaminated clothing and wash it before reuse. | | |

SKIN CORROSION/IRRITATION

(Chapter 3.2)

Symbol

No symbol

Hazard category

Signal word

Hazard statement

3

Warning

H316 Causes mild skin irritation

| Precautionary statements | | | |
|--------------------------|---|---------|----------|
| Prevention | Response | Storage | Disposal |
| | P332 + P313 If skin irritation occurs: Get medical advice/attention. <i>– may be omitted when P333+P313 appears on the label</i> | | |

EYE DAMAGE/IRRITATION
(Chapter 3.3)

| |
|----------------------------|
| Symbol Corrosion |
|----------------------------|

| | | |
|------------------------|--------------------|--------------------------------|
| Hazard category | Signal word | Hazard statement |
| 1 | Danger | H318 Causes serious eye damage |



| Precautionary statements | | | |
|---|---|---------|----------|
| Prevention | Response | Storage | Disposal |
| P280 Wear eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. | | |

SENSITIZATION - RESPIRATORY

(Chapter 3.4)

Symbol

Health hazard



| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|--|
| 1, 1A, 1B | Danger | H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled |

| Precautionary statements | | | |
|---|---|---------|--|
| Prevention | Response | Storage | Disposal |
| <p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray. Manufacturer/supplier or the competent authority to specify applicable conditions. <i>- may be omitted if P260 is given on the label</i></p> <p>P284 [In case of inadequate ventilation] wear respiratory protection. Manufacturer/supplier or the competent authority to specify equipment <i>- text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use.</i></p> | <p>P304 + P340 IF INHALED: remove person to fresh air and keep comfortable for breathing.</p> <p>P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.</p> | | <p>P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified).</p> |

SENSITIZATION - SKIN
(Chapter 3.4)

| |
|-----------------------------------|
| Symbol Exclamation mark |
|-----------------------------------|

| | | | |
|------------------------|--------------------|--|----------|
| Hazard category | Signal word | Hazard statement | |
| 1, 1A, 1B | Warning | H317 May cause an allergic skin reaction | ! |

| Precautionary statements | | | |
|--|---|---------|---|
| Prevention | Response | Storage | Disposal |
| P261 Avoid breathing dust/fume/gas/mist/vapours/spray. Manufacturer/supplier or the competent authority to specify applicable conditions. <i>- may be omitted if P260 is given on the label</i> P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves. Manufacturer/supplier or the competent authority to specify type of equipment. | P302 + P352 IF ON SKIN: Wash with plenty of water/... ...Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P333 + P313 If skin irritation or rash occurs: Get medical advice/attention. P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. <i>- Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate.</i> P362+P364 Take off contaminated clothing and wash it before reuse | | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

GERM CELL MUTAGENICITY

(Chapter 3.5)

| |
|---|
| <p align="center">Symbol Health hazard</p> |
|---|

| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|---|
| 1 | Danger | H340 May cause genetic defects <...> |
| 2 | Warning | H341 Suspected of causing genetic defects <...> <...> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |



| Precautionary statements | | | |
|---|--|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P308 + P313 IF exposed or concerned: Get medical advice/attention. | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

CARCINOGENICITY
(Chapter 3.6)

| |
|--------------------------------|
| Symbol Health hazard |
|--------------------------------|

| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|--|
| 1 | Danger | H350 May cause cancer <...> |
| 2 | Warning | H351 Suspected of causing cancer <...> |

<...> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).



| Precautionary statements | | | |
|---|--|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P308 + P313 IF exposed or concerned: Get medical advice/attention. | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

TOXIC TO REPRODUCTION
(Chapter 3.7)

| |
|--------------------------------|
| Symbol Health hazard |
|--------------------------------|

| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|--|
| 1 | Danger | H360 May damage fertility or the unborn child <...> <<...>> |
| 2 | Warning | H361 Suspected of damaging fertility or the unborn child <...> <<...>> <...> (state specific effect if known) <<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |



| Precautionary statements | | | |
|---|--|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | P308 + P313 IF exposed or concerned: Get medical advice/attention. | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

SPECIFIC TARGET ORGAN TOXICITY (Single exposure)
(Chapter 3.8)

| |
|--------------------------------|
| Symbol Health hazard |
|--------------------------------|

| Hazard category | Signal word | Hazard statement |
|------------------------|--------------------|---|
| 1 | Danger | H370 Causes damage to organs <...> <<...>> <...> (or state all organs affected if known) <<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |



| Precautionary statements | | | |
|--|--|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| P260 Do not breathe dust/fume/gas/mist/vapours/spray. Manufacturer/supplier or the competent authority to specify applicable conditions. P264 Wash ...thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 Do not eat, drink or smoke when using this product. | P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. - if immediate measures are required. | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

SPECIFIC TARGET ORGAN TOXICITY (Single exposure)
(Chapter 3.8)

Symbol
Health hazard



| Hazard category | Signal word | Hazard statement |
|------------------------|--------------------|---|
| 2 | Warning | H371 May cause damage to organs <...> <<...>> <...> (or state all organs affected, if known) <<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |

| Precautionary statements | | | |
|---|--|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| P260 Do not breathe dust/fume/gas/mist/vapours/spray. Manufacturer/supplier or the competent authority to specify applicable conditions. P264 Wash ... thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 Do not eat, drink or smoke when using this product. | P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

SPECIFIC TARGET ORGAN TOXICITY (Single exposure)
(Chapter 3.8)

| |
|-----------------------------------|
| Symbol Exclamation mark |
|-----------------------------------|

| Hazard category | Signal word | Hazard statement | |
|-----------------|-------------|------------------|--------------------------------------|
| 3 | Warning | H335 | May cause respiratory irritation; or |
| | | H336 | May cause drowsiness or dizziness |



| Precautionary statements | | | |
|--|--|--|---|
| Prevention | Response | Storage | Disposal |
| P261 Avoid breathing dust/fume/gas/mist/ vapours/spray. Manufacturer/supplier or the competent authority to specify applicable conditions. <i>- may be omitted if P260 is given on the label</i> P271 Use only outdoors or in a well-ventilated area. | P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/doctor/.../if you feel unwell. ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. | P403 + P233 Store in a well-ventilated place. Keep container tightly closed. <i>- if product is volatile so as to generate hazardous atmosphere.</i> P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

ASPIRATION HAZARD

(Chapter 3.10)

Symbol

Health hazard

| Hazard category | Signal word | Hazard statement | |
|-----------------|-------------|------------------|--|
| 1 | Danger | H304 | May be fatal if swallowed and enters airways |
| 2 | Warning | H305 | May be harmful if swallowed and enters airways |



| Precautionary statements | | | |
|--------------------------|---|---------------------------------|---|
| Prevention | Response | Storage | Disposal |
| | P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/... ...Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P331 Do NOT induce vomiting. | P405 Store locked up. | P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). |

Annex 4

A4.3.2.1.2 Amend to read as follows:

“If the substance or mixture is classified in accordance with Parts 2, 3 and/or 4 of the GHS generally the classification is communicated by providing the appropriate hazard class and category/subcategory to indicate the hazard (for example, flammable liquid, Category 1 and skin corrosive, Category 1A). However, when classification is differentiated within a hazard class and results in unique hazard statements, then the classification should also reflect that differentiation. For example, the route of exposure differentiates the acute toxicity classification as follows: acute oral toxicity Category 1, acute dermal toxicity Category 1 and acute inhalation toxicity Category 1. If a substance or mixture is classified into more than one category in a hazard class that is differentiated, then all classifications should be communicated.”
