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**COMMITTEE OF EXPERTS ON THE TRANSPORT OF
DANGEROUS GOODS AND ON THE GLOBALLY
HARMONIZED SYSTEM OF CLASSIFICATION
AND LABELLING OF CHEMICALS**

REPORT OF THE COMMITTEE OF EXPERTS
ON ITS THIRD SESSION
(Geneva, 14 December 2006)

Addendum

Annex 3

Amendments to the Globally Harmonized System of classification
and labelling of chemicals (GHS)

This annex contains the amendments to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) (ST/SG/AC.10/30/Rev.1) adopted by the Committee of Experts at its third session.

**AMENDMENTS TO THE FIRST REVISED EDITION OF THE
GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF
CHEMICALS (GHS), (ST/SG/AC.10/30/Rev.2)**

PART 1

Chapter 1.1

1.1.3.1.5 Add a new paragraph 1.1.3.1.5.4 to read as follows:

“1.1.3.1.5.4 Guidance on the interpretation of the building block approach

(a) Hazard classes are building blocks:

Within their jurisdiction and keeping in mind the goal of full harmonization as well as international conventions, competent authorities may decide which hazard classes they apply;

(b) Within a hazard class, each hazard category can be seen as a building block:

For a given hazard class, competent authorities have the possibility not to apply all categories. Nevertheless, in order to preserve consistency, some restrictions to this principle should be set, as follows:

- (i) The classification criteria such as the cut-off values or concentration limits for adopted hazard categories should not be altered. However, adjacent sub-categories (e.g. carcinogenicity Categories 1A and 1B) may be merged into one category. Nevertheless, adjacent hazard categories should not be merged if it results in renumbering the remaining hazard categories. Furthermore, where sub-categories are merged, the names or numbers of the original GHS sub-categories should be retained (e.g. Carcinogenicity Category 1 or 1A/B) to facilitate hazard communication;
- (ii) Where a competent authority adopts a hazard category, it should also adopt all the categories for higher hazard levels in that class. As a consequence, when a competent authority adopts a hazard class, it will always adopt at least the highest hazard category (Category 1), and, where more than one hazard category is adopted, these hazard categories will form an unbroken sequence.

NOTE 1: *Some hazard classes contain additional categories that can be considered on a stand alone basis, for example, Category 3 “transient target organ effects” for the hazard class “Specific target organ toxicity” (Chapter 3.8), and hazard category “Effects on or via lactation” for the hazard class “reproductive toxicity” (Chapter 3.7).*

***NOTE 2:** It is noted, however, that the goal of the GHS is to achieve worldwide harmonization (see 1.1.2.3). Therefore, while differences between sectors may persist, the use of an identical set of categories at a worldwide level within each sector should be encouraged.”*

Chapter 1.2

In the definition of “Gas”, insert the word “(absolute)” after “300 kPa”.

Chapter 1.3

1.3.2.4.5 Renumber current paragraph under the heading as 1.3.2.4.5.1 and add a new paragraph 1.3.2.4.5.2 to read as follows:

“1.3.2.4.5.2 Certain physical hazards (e.g. due to explosive or oxidizing properties) may be altered by dilution, as is the case for desensitized explosives, by inclusion in a mixture or article, packaging or other factors. Classification procedures for specific sectors (e.g. storage) should take experience and expertise into account.”.

Chapter 1.4

1.4.10.5.2 (b) Current text under the heading becomes sub-paragraph “(i)”. Add a new sub-paragraph “(ii)” to read as follows:

“(ii) Hazard statements and a code uniquely identifying each one are listed in section 1 of Annex 3. The hazard statement code is intended to be used for reference purposes. It is not part of the hazard statement text and should not be used to replace it”.

1.4.10.5.2 (c) Current text under the heading becomes sub-paragraph “(i)”. Add a new sub-paragraph “(ii)” to read as follows:

“(ii) Precautionary statements and a code uniquely identifying each one are listed in section 2 of Annex 3. The precautionary statement code is intended to be used for reference purposes. It is not part of the precautionary statement text and should not be used to replace it.”.

PART 2

Chapter 2.1

2.1.2.2 In Note 2 to table 2.1.1, insert “, see 1.3.2.4.5.2” at the end of the paragraph after “(e.g. transport)”.

2.1.3 Insert the following note after table 2.1.2:

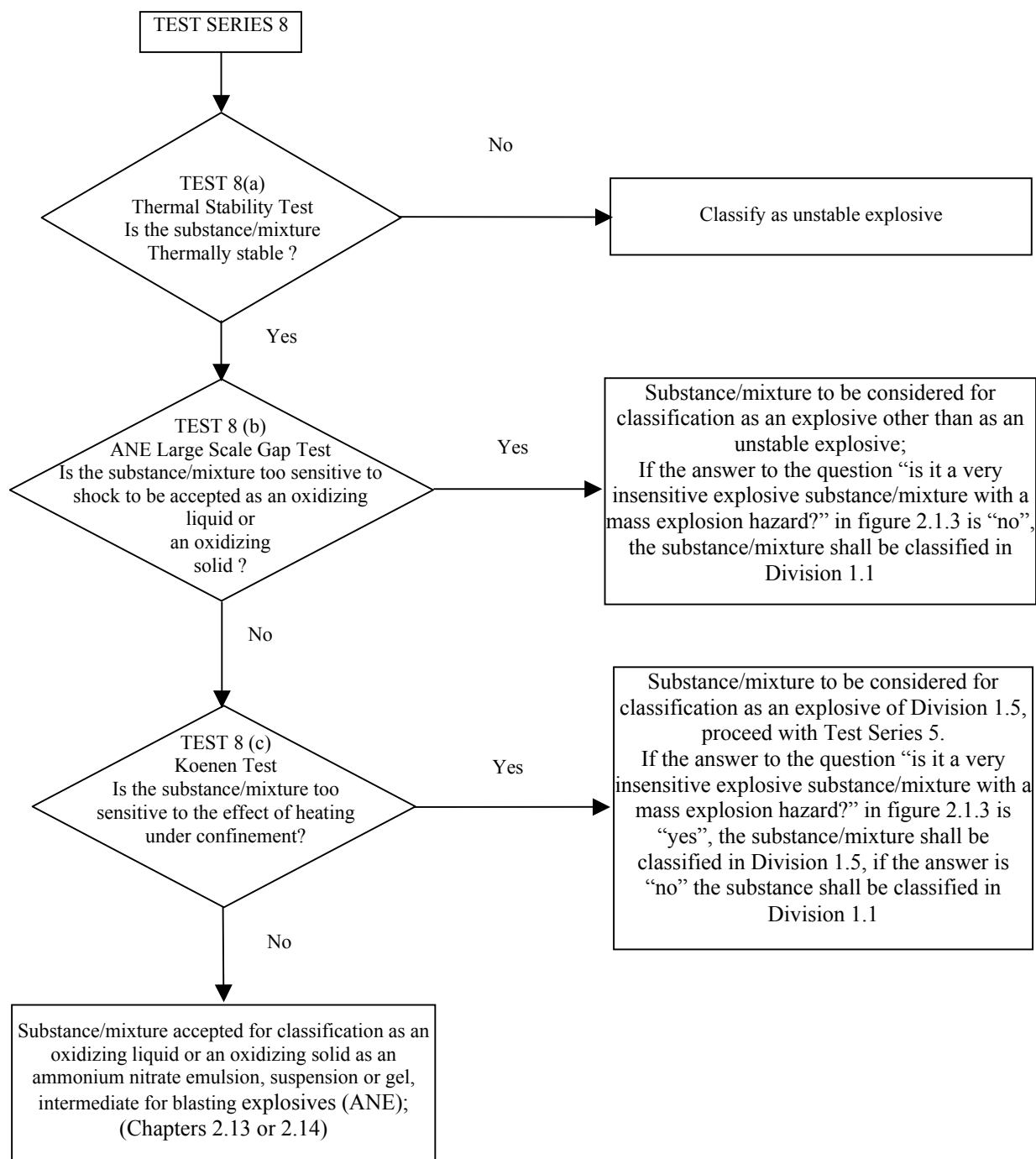
***“NOTE:** Unpackaged explosives or explosives repacked in packagings other than the original or similar packaging shall have the following label elements:*

- (a) Symbol: exploding bomb;*
- (b) Signal word: “Danger”; and*
- (c) Hazard statement: “explosive; mass explosion hazard”*

unless the hazard is shown to correspond to one of the hazard categories in table 2.1.2, in which case the corresponding symbol, signal word and/or the hazard statement shall be assigned.”.

2.1.4.1 Replace current figure 2.1.4 with the following:

“



Chapter 2.4

- 2.4.4.1 In the introductory text before the decision logic, insert “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” before “should be performed”.
- 2.4.4.2 Amend the end of the title to read “...according to ISO 10156:1996 and ISO 10156-2:2005”.

Chapter 2.5

- 2.5.1 In the definition, replace “280 kPa at 20° C or as a refrigerated liquid” with “200 kPa (gauge) or be a liquefied or a refrigerated liquefied gas”.
- 2.5.4.1 In the decision logic, 2nd box from the top on the left hand side, in (a), replace “3 bar” with “300 kPa (absolute)”.

Chapter 2.14

- 2.14.2 Current note under table 2.14.1 becomes note 2. Insert a new note 1 to read as follows:
- “NOTE 1:** Some oxidizing solids may also present explosion hazards under certain conditions (e.g. when stored in large quantities). For example, some types of ammonium nitrate may give rise to an explosion hazard under extreme conditions and the “Resistance to detonation test” (BC Code¹, Annex 3, Test 5) may be used to assess this hazard. Appropriate comments should be made in the Safety Data Sheet.”.

Chapter 2.16

- 2.16.2 Amend the criteria in table 2.16.1 to read as follows:
- “Corrosion rate on either steel or aluminium surfaces exceeding 6.25 mm per year at a test temperature of 55 °C when tested on both materials.”.
- Add the following new note under the table:
- “NOTE:** *Where an initial test on either steel or aluminium indicates the substance or mixture being tested is corrosive the follow up test on the other metal is not required.*”

¹ Code of Safe Practice for Solid Bulk Cargoes, IMO, 2005.

- 2.16.4.1 In decision logic 2.16, amend the text in the second box on the left to read as follows:

“Does it corrode on either steel or aluminium surfaces at a rate exceeding 6.25 mm per year at a test temperature of 55 °C when tested on both materials?”.

Consequential amendments to table A2.16: see list of amendments to Annex 2 in this document.

PART 3

Chapter 3.1

- 3.1.2 In table 3.1.1, in the column for Category 4, replace “5000” with “20000” in the entry for “Gases”;

In note “d” to table 3.1.1, replace “5000” with “20000”.

- 3.1.3 Amend table 3.1.2 as follows:

- Under “Classification category or experimentally obtained acute toxicity range estimate” replace “5000” with “20000” in the entry for gases;
- Under “Converted Acute Toxicity point estimate”, replace “3000” with “4500” in the entry for gases.

- 3.1.5 In decision logic 3.1.1, replace “5000 ppm” with “20000 ppm” for gas inhalation in the text box that follows “No” from Category 3.

Chapter 3.2

- 3.2.2.5.4 In the English version of the GHS, in table 3.2.2, under “Criteria”, replace “ $\geq 2.3 < 4.0$ ” with “ $\geq 2.3 \leq 4.0$ ” and in the French version replace “entre 2.3 et 4.0” with “ $\geq 2,3 \leq 4,0$ ” and “entre 1.5 et 2.3” with “ $\geq 1,5 < 2,3$ ”.

Chapter 3.3

In the notes to figure 3.3.1 (“step 3”), replace “ < 2 and > 11.5 ” with “ ≤ 2 and ≥ 11.5 ”.

- 3.3.3.1 (3rd sentence) In the English version of the GHS, replace “a pH of 2 or less or 11.5 or greater” with “a pH ≤ 2 or ≥ 11.5 ” and in the French version replace “pH est inférieur à 2 ou supérieur à 11.5” with “pH ≤ 2 ou $\geq 11,5$ ”.

Chapter 3.4

- 3.4.1 Add “and general considerations” in the title after “Definitions”;

Insert a new paragraph number “3.4.1.1” before the definition of “Respiratory sensitizer”.

Replace “induce” with “lead to” in the definitions of “respiratory sensitizer” and “skin sensitizer”;

Add the following paragraphs 3.4.1.2 to 3.4.1.4 after the definition of “skin sensitizer”:

“3.4.1.2 For the purpose of this Chapter, sensitization includes two phases: the first phase is induction of specialized immunological memory in an individual by exposure to an allergen. The second phase is elicitation, i.e. production of a cell-mediated or antibody-mediated allergic response by exposure of a sensitized individual to an allergen.

3.4.1.3 For respiratory sensitization, the pattern of induction followed by elicitation phases is shared in common with skin sensitization. For skin sensitization, an induction phase is required in which the immune system learns to react; clinical symptoms can then arise when subsequent exposure is sufficient to elicit a visible skin reaction (elicitation phase). As a consequence, predictive tests usually follow this pattern in which there is an induction phase, the response to which is measured by a standardized elicitation phase, typically involving a patch test. The local lymph node assay is the exception, directly measuring the induction response. Evidence of skin sensitization in humans normally is assessed by a diagnostic patch test.

3.4.1.4 Usually, for both skin and respiratory sensitization, lower levels are necessary for elicitation than are required for induction. Provisions for alerting sensitized individuals to the presence of a particular sensitizer in a mixture can be found at section 3.4.4”.

3.4.2.1.1 and

3.4.2.2.1 In the box, replace “induce” by “lead to”;

Consequential amendments to tables A2.20 and A2.21: see list of amendments to Annex 2 in this document.

3.4.2.2.4.1 At the beginning of the second sentence, insert “Guinea pig” between “non-adjuvant” and “test method”.

3.4.4 Insert “3.4.4.1” before the first paragraph.

Add a new paragraph 3.4.4.2 after table 3.4.2 as follows:

“3.4.4.2 Some chemicals that are classified as sensitizers may elicit a response, when present in a mixture in quantities below the cut-offs established in Table 3.4.1, in individuals who are already sensitized to the chemicals. To protect these individuals, certain authorities may choose to require the name of the ingredient as a supplemental label element even though the mixture as a whole is not classified

as sensitizer. Others may choose to classify and label the mixture as a sensitizer in accordance with notes 1, 3 and 5 to Table 3.4.1.”

3.4.5 Decision logic 3.4.1 and 3.4.2

- In the central box, in the sentence starting with “is there evidence in humans...” replace “ “induce” with “lead to”;
- In the last but one box on the left, after “sensitizer at ⁴”, insert “⁵.” and a new footnote after current footnote 4 as follows: “⁵ See 3.4.4.2.”.

In decision logic 3.4.1, amend the text in the last but one box on the left to read as follows:

Does the mixture contain one or more ingredients classified as a respiratory sensitizer at ^{4,5}:

- $\geq 0.1\%$ w/w (solid/liquid)?
- $\geq 1.0\%$ w/w (solid/liquid)?

or

- $\geq 0.1\%$ v/v (gas)? (see 3.4.3.3)
- $\geq 0.2\%$ v/v (gas)? (see 3.4.3.3)

In decision logic 3.4.2, amend the text in the last but one box on the left to read as follows:

Does the mixture contain one or more ingredients classified as a skin sensitizer at ^{4,5}:

- $\geq 0.1\%$?
- $\geq 1.0\%$? (see 3.4.3.3)

Chapter 3.6

- 3.6.2.5.2 Add the following sentence at the end of the paragraph, after the last sub-paragraph:

“Guidance on how to consider important factors in classification of carcinogenicity is included in 3.6.5.3”.

- 3.6.5.3 Renumber the paragraph starting with “Excerpts from monographs...” as 3.6.5.3.1.

Current paragraphs 3.6.5.3.1, 3.6.5.3.1.1, 3.6.5.3.1.2 and 3.6.5.3.2 become 3.6.5.3.1.1, 3.6.5.3.1.1.1, 3.6.5.3.1.1.2 and 3.6.5.3.1.2 respectively.

Move the reference to footnote 4 (currently in the title, after “guidance”) to the renumbered paragraph 3.6.5.3.1, after “Excerpts”.

3.6.5.3.2 Insert the following new sub-section:

“3.6.5.3.2 Guidance on how to consider important factors in classification of carcinogenicity”*

The guidance provides an approach to analysis rather than hard and fast rules. This section provides some considerations. The weight of evidence analysis called for in GHS is an integrative approach which considers important factors in determining carcinogenic potential along with the strength of evidence analysis. The IPCS “*Conceptual Framework for Evaluating a Mode of Action for Chemical carcinogenesis*” (2001), the ILSI “*Framework for Human Relevance Analysis of Information on Carcinogenic Modes of Action*” (Meek et al., 2003; Cohen et al., 2003, 2004) and the IARC (Preamble section 12(b)) provide a basis for systematic assessments which may be performed in a consistent fashion internationally; the IPCS also convened a panel in 2004 to further develop and clarify the human relevance framework. However, the internationally available documents are not intended to dictate answers, nor provide lists of criteria to be checked off.

3.6.5.3.2.1 Mode of action

The various international documents on carcinogen assessment all note that mode of action in and of itself, or consideration of comparative metabolism, should be evaluated on a case-by-case basis and are part of an analytic evaluative approach. One must look closely at any mode of action in animal experiments taking into consideration comparative toxicokinetics/toxicodynamics between the animal test species and humans to determine the relevance of the results to humans. This may lead to the possibility of discounting very specific effects of certain types of chemicals. Life stage-dependent effects on cellular differentiation may also lead to qualitative differences between animals and humans. Only if a mode of action of tumour development is conclusively determined not to be operative in humans may the carcinogenic evidence for that tumour be discounted. However, a weight of evidence evaluation for a substance calls for any other tumorigenic activity to be evaluated as well.

3.6.5.3.2.2 Responses in multiple animal experiments

Positive responses in several species add to the weight of evidence, that a chemical is a carcinogen. Taking into account all of the factors listed in 3.6.2.5.2 and more, such chemicals with positive outcomes in two or more species would be provisionally considered to be classified in GHS Category 1B until human relevance of animal results are assessed in their entirety. It should be noted, however, that positive results for one species in at least two independent studies, or a single positive study showing unusually strong evidence of malignancy may also lead to Category 1B.

3.6.5.3.2.3 Responses are in one sex or both sexes

Any case of gender-specific tumours should be evaluated in light of the total tumorigenic response to the substance observed at other sites (multi-site responses or incidence above background) in determining the carcinogenic potential of the substance.

If tumours are seen only in one sex of an animal species, the mode of action should be carefully evaluated to see if the response is consistent with the postulated mode of action. Effects seen only in one sex in a test species may be less convincing than effects seen in both sexes, unless there is a clear pathophysiological difference consistent with the mode of action to explain the single sex response.

3.6.5.3.2.4 Confounding effects of excessive toxicity or localized effects

Tumours occurring only at excessive doses associated with severe toxicity generally have doubtful potential for carcinogenicity in humans. In addition, tumours occurring only at sites of contact and/or only at excessive doses need to be carefully evaluated for human relevance for carcinogenic hazard. For example, forestomach tumours, following administration by gavage of an irritating or corrosive, non-mutagenic chemical, may be of questionable relevance. However, such determinations must be evaluated carefully in justifying the carcinogenic potential for humans; any occurrence of other tumours at distant sites must also be considered.

3.6.5.3.2.5 Tumour type, reduced tumour latency

Unusual tumour types or tumours occurring with reduced latency may add to the weight of evidence for the carcinogenic potential of a substance, even if the tumours are not statistically significant.

Toxicokinetic behaviour is normally assumed to be similar in animals and humans, at least from a qualitative perspective. On the other hand, certain tumour types in animals may be associated with toxicokinetics or toxicodynamics that are unique to the animal species tested and may not be predictive of carcinogenicity in humans. Very few such examples have been agreed internationally. However, one example is the lack of human relevance of kidney tumours in male rats associated with compounds causing α_2 -globulin nephropathy (IARC, Scientific Publication N° 147). Even when a particular tumour type may be discounted, expert judgment must be used in assessing the total tumour profile in any animal experiment.”.

* *References*

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International Programme on Chemical Safety Harmonization Group. 2004 *Report of the First Meeting of the Cancer Working Group.* World Health Organization. Report IPCS/HSC-CWG-1/04. Geneva

International Agency for Research on Cancer. *IARC Monographs on the Evaluation of Carcinogenic Risks to Human. Preambles to volumes.* World Health Organization. Lyon, France.

S.M. Cohen, P.A. Fenner-Crisp, and D.E. Patton. 2003. *Special Issue: Cancer Modes of Action and Human Relevance.* Critical Reviews in Toxicology, R.O. McClellan, ed., Volume 33/Issue 6. CRC Press.

C.C. Capen, E. Dybing and J.D. Wilbourn. 1999. *Species differences in Thyroid, Kidney and Urinary Bladder Carcinogenesis.* International Agency for Research on Cancer, Scientific Publication N° 147.”

Chapters 3.8 and 3.9

Delete the word “systemic” in relation to “specific target organ systemic toxicity” and all its related terms.

Note by the secretariat: *The same amendment applies to other parts of the GHS where the same terminology is used.*

Chapter 4.1

In sub-sections 4.1.3.5.5.3 and 4.1.3.5.5.4 and in tables 4.1.2 and 4.1.3, replace “greater than 25 %” with “ $\geq 25\%$ ”.

ANNEXES

Annex 2

- A2.16 Amend the text under the heading “criteria” to read as follows:
“Corrosion rate on either steel or aluminium surfaces exceeding 6.25 mm per year at a test temperature of 55 °C when tested on both materials.”.
- A2.17 In the table, for Category 4 (page 283 of the English version of the GHS) replace “5000” with “20000”.
- A2.18 In the table (page 285 of the English version of the GHS), replace “ $\geq 2.3 < 4.0$ ” with “ $\geq 2.3 \leq 4.0$ ”.
- A2.19 In the table (page 287 of the English version of the GHS), replace “ < 2 and > 11.5 ” with “ ≤ 2 and ≥ 11.5 ”.
- A2.20 In the first sentence of paragraph 1, under the heading “Criteria”, replace “induces” with “leads to”.
- A2.21 In the first sentence of paragraph 1, under the heading “Criteria”, replace “induce” with “lead to”.
- A2.28 (a) and (b) In the tables (pages 299 to 303 of the English version of the GHS), replace “ $> 25\%$ ” with “ $\geq 25\%$ ”.

Annex 3

Amend the title to read as follows: “**CODIFICATION OF HAZARD STATEMENTS, CODIFICATION AND USE OF PRECAUTIONARY STATEMENTS AND EXAMPLES OF PRECAUTIONARY PICTOGRAMS**”

Replace current text in annex 3 with the following text:

“Annex 3

SECTION 1

CODIFICATION OF HAZARD STATEMENTS

A3.1.1 Introduction

A3.1.1.1 *Hazard statement* means a phrase assigned to a hazard class and category that describes the nature of the hazards of a hazardous product, including, where appropriate, the degree of hazard.

A3.1.1.2 This section contains the recommended codes assigned to each of the hazard statements applicable to the hazard categories under the GHS.

A3.1.1.3 The hazard statement codes are intended to be used for reference purposes. They are not part of the hazard statement text and should not be used to replace it.

A3.1.2 Codification of hazard statements

A3.1.2.1 Hazard statements are assigned a unique alphanumerical code which consists of one letter and three numbers, as follows:

- (a) the letter “H” (for “hazard statement”);
- (b) a number designating the type of hazard to which the hazard statement is assigned according to the numbering of the different parts of the GHS, as follows:
 - “2” for physical hazards;
 - “3” for health hazards;
 - “4” for environmental hazards;
- (c) two numbers corresponding to the sequential numbering of hazards arising from the intrinsic properties of the substance or mixture, such as explosivity (codes from 200 to 210), flammability (codes from 220 to 230), etc.

A3.1.2.2 The codes to be used for designating hazard statements are listed, in numerical order, in Table A3.1.1 for physical hazards, Table A3.1.2 for health hazards and Table A3.1.3 for environmental hazards. Each table is divided into 4 columns containing the following information:

Column (1) Hazard statement code;

Column (2) Hazard statement text;

The text in bold should appear on the label, except as otherwise specified. The information in italics should also appear as part of the hazard statement when the information is known.

For example: “**causes damages to organs** (*or state all organs affected, if known*) **through prolonged or repeated exposure** (*state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard*)”.

Column (3) Hazard class, with a reference to the Chapter of the GHS where information about the hazard class may be found.

Column (4) Hazard category or categories within a hazard class for which the use of a hazard statement is applicable.

Table A3.1.1 Hazard statement codes for physical hazards

Code (1)	Hazard statements for physical hazards (2)	Hazard class (GHS Chapter) (3)	Hazard category (4)
H200	Unstable explosive	Explosives (Chapter 2.1)	Unstable Explosive
H201	Explosive; mass explosion hazard	Explosives (Chapter 2.1)	Division 1.1
H202	Explosive; severe projection hazard	Explosives (Chapter 2.1)	Division 1.2
H203	Explosive; fire, blast or projection hazard	Explosives (Chapter 2.1)	Division 1.3
H204	Fire or projection hazard	Explosives (Chapter 2.1)	Division 1.4
H205	May mass explode in fire	Explosives (Chapter 2.1)	Division 1.5
H220	Extremely flammable gas	Flammable gases (Chapter 2.2)	1
H221	Flammable gas	Flammable gases (Chapter 2.2)	2
H222	Extremely flammable aerosol	Flammable aerosols (Chapter 2.3)	1
H223	Flammable aerosol	Flammable aerosols (Chapter 2.3)	2
H224	Extremely flammable liquid and vapour	Flammable liquids (Chapter 2.6)	1
H225	Highly flammable liquid and vapour	Flammable liquids (Chapter 2.6)	2
H226	Flammable liquid and vapour	Flammable liquids (Chapter 2.6)	3
H227	Combustible liquid	Flammable liquids (Chapter 2.6)	4
H228	Flammable solid	Flammable solids (Chapter 2.7)	1, 2
H240	Heating may cause an explosion	Self-reactive substances and mixtures (Chapter 2.8); and Organic peroxides (Chapter 2.15)	Type A
H241	Heating may cause a fire or explosion	Self-reactive substances and mixtures (Chapter 2.8); and Organic peroxides (Chapter 2.15)	Type B
H242	Heating may cause a fire	Self-reactive substances and mixtures (Chapter 2.8); and Organic peroxides (Chapter 2.15)	Types C, D, E, F
H250	Catches fire spontaneously if exposed to air	Pyrophoric liquids (Chapter 2.9); Pyrophoric solids (Chapter 2.10)	1
H251	Self-heating; may catch fire	Self-heating substances and mixtures (Chapter 2.11)	1
H252	Self-heating in large quantities; may catch fire	Self-heating substances and mixtures (Chapter 2.11)	2

Code (1)	Hazard statements for physical hazards (2)	Hazard class (GHS Chapter) (3)	Hazard category (4)
H260	In contact with water releases flammable gases which may ignite spontaneously	Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1
H261	In contact with water releases flammable gas	Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	2, 3
H270	May cause or intensify fire; oxidizer	Oxidizing gases (Chapter 2.4)	1
H271	May cause fire or explosion; strong oxidizer	Oxidizing liquids (Chapter 2.13); Oxidizing solids (Chapter 2.14)	1
H272	May intensify fire; oxidizer	Oxidizing liquids (Chapter 2.13); Oxidizing solids (Chapter 2.14)	2, 3
H280	Contains gas under pressure; may explode if heated	Gases under pressure (Chapter 2.5)	Compressed gas Liquefied gas Dissolved gas
H281	Contains refrigerated gas; may cause cryogenic burns or injury	Gases under pressure (Chapter 2.5)	Refrigerated liquefied gas
H290	May be corrosive to metals	Corrosive to metals (Chapter 2.16)	1

Table A3.1.2 Hazard statement codes for health hazards

Code (1)	Hazard statements for health hazards (2)	Hazard class (GHS Chapter) (3)	Hazard category (4)
H300	Fatal if swallowed	Acute toxicity – oral (Chapter 3.1)	1, 2
H301	Toxic if swallowed	Acute toxicity – oral (Chapter 3.1)	3
H302	Harmful if swallowed	Acute toxicity – oral (Chapter 3.1)	4
H303	May be harmful if swallowed	Acute toxicity – oral (Chapter 3.1)	5
H304	May be fatal if swallowed and enters airways	Aspiration hazard (Chapter 3.10)	1
H305	May be harmful if swallowed and enters airways	Aspiration hazard (Chapter 3.10)	2
H310	Fatal in contact with skin	Acute toxicity – dermal (Chapter 3.1)	1, 2
H311	Toxic in contact with skin	Acute toxicity – dermal (Chapter 3.1)	3

Code (1)	Hazard statements for health hazards (2)	Hazard class (GHS Chapter) (3)	Hazard category (4)
H312	Harmful in contact with skin	Acute toxicity – dermal (Chapter 3.1)	4
H313	May be harmful in contact with skin	Acute toxicity – dermal (Chapter 3.1)	5
H314	Causes severe skin burns and eye damage	Skin corrosion/irritation (Chapter 3.2)	1A, 1B, 1C
H315	Causes skin irritation	Skin corrosion/irritation (Chapter 3.2)	2
H316	Causes mild skin irritation	Skin corrosion/irritation (Chapter 3.2)	3
H317	May cause an allergic skin reaction	Sensitisation – skin (Chapter 3.4)	1
H318	Causes serious eye damage	Serious eye damage/eye irritation (Chapter 3.3)	1
H319	Causes serious eye irritation	Serious eye damage/eye irritation (Chapter 3.3)	2A
H320	Causes eye irritation	Serious eye damage/eye irritation (Chapter 3.3)	2B
H330	Fatal if inhaled	Acute toxicity – inhalation (Chapter 3.1)	1, 2
H331	Toxic if inhaled	Acute toxicity – inhalation (Chapter 3.1)	3
H332	Harmful if inhaled	Acute toxicity – inhalation (Chapter 3.1)	4
H333	May be harmful if inhaled	Acute toxicity – inhalation (Chapter 3.1)	5
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled	Sensitisation – respiratory (Chapter 3.4)	1
H335	May cause respiratory irritation	Specific target organ toxicity – single exposure; Respiratory tract irritation (Chapter 3.8);	3
H336	May cause drowsiness or dizziness	Specific target organ toxicity – single exposure; Narcosis (Chapter 3.8)	3
H340	May cause genetic defects (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	Germ cell mutagenicity (Chapter 3.5)	1A, 1B
H341	Suspected of causing genetic defects (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	Germ cell mutagenicity (Chapter 3.5)	2

Code (1)	Hazard statements for health hazards (2)	Hazard class (GHS Chapter) (3)	Hazard category (4)
H350	May cause cancer (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	Carcinogenicity (Chapter 3.6)	1A, 1B
H351	Suspected of causing cancer (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	Carcinogenicity (Chapter 3.6)	2
H360	May damage fertility or the unborn child (<i>state specific effect if known (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</i>)	Reproductive toxicity (Chapter 3.7)	1A, 1B
H361	Suspected of damaging fertility or the unborn child (<i>state specific effect if known (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</i>)	Reproductive toxicity (Chapter 3.7)	2
H362	May cause harm to breast-fed children	Reproductive toxicity – effects on or via lactation (Chapter 3.7)	Additional category
H370	Causes damage to organs (<i>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)</i>)	Specific target organ toxicity – single exposure (Chapter 3.8)	1
H371	May cause damage to organs (<i>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)</i>)	Specific target organ toxicity – single exposure (Chapter 3.8)	2
H372	Causes damage to organs (<i>or state all organs affected, if known</i>) through prolonged or repeated exposure (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	Specific target organ toxicity – repeated exposure (Chapter 3.9)	1
H373	May cause damage to organs (<i>or state all organs affected, if known</i>) through prolonged or repeated exposure (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	Specific target organ toxicity – repeated exposure (Chapter 3.9)	2

Table A3.1.3 Hazard statement codes for environmental hazards

Code (1)	Hazard statements for environmental hazards (2)	Hazard class (GHS Chapter) (3)	Hazard category (4)
H400	Very toxic to aquatic life	Hazardous to the aquatic environment – acute toxicity (Chapter 4.1)	1
H401	Toxic to aquatic life	Hazardous to the aquatic environment – acute toxicity (Chapter 4.1)	2
H402	Harmful to aquatic life	Hazardous to the aquatic environment – acute toxicity (Chapter 4.1)	3
H410	Very toxic to aquatic life with long lasting effects	Hazardous to the aquatic environment – chronic toxicity (Chapter 4.1)	1
H411	Toxic to aquatic life with long lasting effects	Hazardous to the aquatic environment – chronic toxicity (Chapter 4.1)	2
H412	Harmful to aquatic life with long lasting effects	Hazardous to the aquatic environment – chronic toxicity (Chapter 4.1)	3
H413	May cause long lasting harmful effects to aquatic life	Hazardous to the aquatic environment – chronic toxicity (Chapter 4.1)	4

Annex 3

SECTION 2

CODIFICATION OF PRECAUTIONARY STATEMENTS

A3.2.1 Introduction

A3.2.1.1 A **Precautionary statement** is a phrase (and/or pictogram) which describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposures to a hazardous product, or improper storage or handling of a hazardous product (see 1.4.10.5.2 (c)).

A3.2.1.2 For the purposes of the GHS, there are five types of precautionary statements: **general, prevention, response** (in case of accidental spillage or exposure, emergency response and first-aid), **storage** and **disposal**. For guidance on the use of GHS precautionary statements, including advice on the selection of the appropriate statements for each GHS hazard class and category, see section 3 to this annex.

A3.2.1.3 This section contains the recommended codes for each of the precautionary statement included in this annex.

A3.2.2 Codification of precautionary statements

A3.2.2.1 Precautionary statements are assigned a unique alphanumerical code which consists of one letter and three numbers as follows:

- (a) a letter “P” (for “precautionary statement”)
- (b) one number designating the type of precautionary statement as follows:
 - “1” for general precautionary statements;
 - “2” for prevention precautionary statements;
 - “3” for response precautionary statements;
 - “4” for storage precautionary statements;
 - “5” for disposal precautionary statements;
- (c) two numbers (corresponding to the sequential numbering of precautionary statements)

A3.2.2.2 The precautionary statement codes are intended to be used for reference purposes. They are not part of the precautionary statement text and should not be used to replace it.

A3.2.2.3 The codes to be used for designating precautionary statements are listed, in numerical order, in Table A3.2.1 for general precautionary statements, Table A3.2.2 for prevention precautionary statements, Table A3.2.3 for response precautionary statements, Table

A3.2.4 for storage precautionary statements and Table A3.2.5 for disposal precautionary statements.

A3.2.3 Structure of the precautionary statement codification tables

A3.2.3.1 Each table is divided into 5 columns containing the following information:

Column (1) The precautionary statement code;

Column (2) The precautionary statement text;

Column (3) The hazard class and the route of exposure, where relevant, for which the use of a precautionary statement is recommended together with a reference to the Chapter of the GHS where information about the hazard class may be found.

Column (4) The hazard category or categories within a hazard class for which the use of a precautionary statement is applicable.

Column (5) Where applicable, conditions relating to the use of a precautionary statement;

A3.2.3.2 The tables show the **core part of the precautionary statements in bold print** in column (2). This is the text, except as otherwise specified, that should appear on the label. Derogations from the recommended labelling statements are at the discretion of competent authorities.

A3.2.3.3 When a backslash or diagonal mark [/] appears in a precautionary statement text in column (2), it indicates that a choice has to be made between the phrases they separate. In such cases, the manufacturer or supplier can choose, or the competent authorities may prescribe the most appropriate phrase(s). For example in P280 “**Wear protective gloves/protective clothing/eye protection/face protection**” could read “**Wear eye protection**”.

A3.2.3.4 When three full stops [...] appears in a precautionary statement text in column (2), they indicate that all applicable conditions are not listed. For example in P241 “**Use explosion-proof electrical/ventilating/lighting/.../equipment**”, the use of “...” indicates that other equipment may need to be specified. Further details of the information to be provided may be found in column (5). In such cases the manufacturer or supplier can choose, or the competent authorities may prescribe the other conditions to be specified.

A3.2.3.5 In cases where additional information is required or information has to be specified, this is indicated by a relevant entry in column (5) in plain text.

A3.2.3.6 When *text in italics* is used in column (5), this indicates specific conditions applying to the use or allocation of the precautionary statement. This may relate to conditions attaching to either the general use of a precautionary statement or its use for a particular hazard class and/or hazard category. For example, for P241 “**Use explosion-proof**

electrical/ventilating/lighting/.../equipment", only applies for flammable solids "*if dust clouds can occur*".

A3.2.3.7 To facilitate translation into the languages of users, precautionary statements have been broken down into individual sentences in the tables in this section. In a number of instances the text that appears on a GHS label requires that these be added back together. This is indicated in this annex by codes conjoined with a plus sign "+". For example: P305 + P351 + P338 indicates that the text to appear on the label is **"IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing"**. These additive precautionary statements can also be found at the end of each of the precautionary statement tables in this section. Translation of only the single precautionary statements is required, as this will enable the compilation of the additive precautionary statements.

Table A3.2.1 Codification of general precautionary statements

Code (1)	General precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P101	If medical advice is needed, have product container or label at hand.	as appropriate		Consumer products
P102	Keep out of reach of children.	as appropriate		Consumer products
P103	Read label before use.	as appropriate		Consumer products

Table A3.2.2 Codification of prevention precautionary statements

Code (1)	Prevention precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P201	Obtain special instructions before use.	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	
		Reproductive toxicity – effects on or via lactation (Chapter 3.7)	Additional category	
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	

Code (1)	Prevention precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.	Explosives (Chapter 2.1)	Divisions 1.1, 1.2, 1.3, 1.4, 1.5	Manufacturer/supplier or the competent authority to specify applicable ignition source(s).
		Flammable gases (Chapter 2.2)	1, 2	
		Flammable aerosols (Chapter 2.3)	1, 2	
		Flammable liquids (Chapter 2.6)	1, 2, 3	
		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	
		Organic peroxides (Chapter 2.15)	Types A, B, C, D, E, F	
		Flammable liquids (Chapter 2.6)	4	- specify to keep away from flames and hot surfaces.
P211	Do not spray on an open flame or other ignition source.	Oxidizing liquids (Chapter 2.13)	1, 2, 3	- specify to keep away from heat.
		Oxidizing solids (Chapter 2.14)	1, 2, 3	
P220	Keep/Store away from clothing/.../combustible materials.	Flammable aerosols (Chapter 2.3)	1, 2	
		Oxidizing gases (Chapter 2.4)	1	... Manufacturer/supplier or the competent authority to specify other incompatible materials.
		Self-reactive substances and mixtures (Chapter 2.8)	Types A, B, C, D, E, F	
		Oxidizing liquids (Chapter 2.13)	2, 3	
		Oxidizing solids (Chapter 2.14)	2, 3	
		Organic peroxides (Chapter 2.15)	Types A, B, C, D, E, F	
		Oxidizing liquids (Chapter 2.13)	1	- specify to keep away from clothing as well as other incompatible materials.
		Oxidizing solids (Chapter 2.14)	1	

Code (1)	Prevention precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P221	Take any precaution to avoid mixing with combustibles/...	Oxidizing liquids (Chapter 2.13)	1, 2, 3	... Manufacturer/supplier or the competent authority to specify other incompatible materials.
		Oxidizing solids (Chapter 2.14)	1, 2, 3	
P222	Do not allow contact with air.	Pyrophoric liquids (Chapter 2.9)	1	
		Pyrophoric solids (Chapter 2.10)	1	
P223	Keep away from any possible contact with water, because of violent reaction and possible flash fire.	Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1, 2	
P230	Keep wetted with ...	Explosives (Chapter 2.1)	Divisions 1.1, 1.2, 1.3, 1.5	... Manufacturer/supplier or the competent authority to specify appropriate material. <i>- if drying out increases explosion hazard, except as needed for manufacturing or operating processes (e.g. nitrocellulose).</i>
P231	Handle under inert gas.	Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1, 2, 3	
P232	Protect from moisture.	Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1, 2, 3	
P233	Keep container tightly closed.	Flammable liquids (Chapter 2.6)	1, 2, 3	<i>- if product is volatile so as to generate hazardous atmosphere.</i>
		Acute toxicity – inhalation (Chapter 3.1)	1, 2, 3	
		Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	

Code (1)	Prevention precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P234	Keep only in original container.	Self-reactive substances and mixtures (Chapter 2.8)	Types A, B, C, D, E, F	
		Organic peroxides (Chapter 2.15)	Types A, B, C, D, E, F	
		Substances and mixtures corrosive to metals (Chapter 2.16)	1	
P235	Keep cool.	Flammable liquids (Chapter 2.6)	1, 2, 3, 4	
		Self-reactive substances and mixtures (Chapter 2.8)	Types A, B, C, D, E, F	
		Self-heating substances and mixtures (Chapter 2.11)	1, 2	
		Organic peroxides (Chapter 2.15)	Types A, B, C, D, E, F	
P240	Ground/bond container and receiving equipment.	Explosives (Chapter 2.1)	Divisions 1.1, 1.2, 1.3, 1.4, 1.5	- if the explosive is electrostatically sensitive.
		Flammable liquids (Chapter 2.6)	1, 2, 3	- if electrostatically sensitive material is for reloading. - if product is volatile so as to generate hazardous atmosphere.
		Flammable solids (Chapter 2.7)	1, 2	- if electrostatically sensitive material is for reloading.
P241	Use explosion-proof electrical/ventilating/lighting/.../ equipment.	Flammable liquids (Chapter 2.6)	1, 2, 3	... Manufacturer/supplier or the competent authority to specify other equipment.
		Flammable solids (Chapter 2.7)	1, 2	... Manufacturer/supplier or the competent authority to specify other equipment. - if dust clouds can occur.
P242	Use only non-sparking tools.	Flammable liquids (Chapter 2.6)	1, 2, 3	

Code (1)	Prevention precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P243	Take precautionary measures against static discharge.	Flammable liquids (Chapter 2.6)	1, 2, 3	
P244	Keep reduction valves free from grease and oil.	Oxidizing gases (Chapter 2.4)	1	
P250	Do not subject to grinding/shock/.../friction.	Explosives (Chapter 2.1)	Divisions 1.1, 1.2, 1.3, 1.4, 1.5	... Manufacturer/supplier or the competent authority to specify applicable rough handling.
P251	Pressurized container: Do not pierce or burn, even after use.	Flammable aerosols (Chapter 2.3)	1, 2	
P260	Do not breathe dust/fume/gas/mist/vapours/spray.	Acute toxicity – inhalation (Chapter 3.1)	1, 2	Manufacturer/supplier or the competent authority to specify applicable conditions. - Specify do not breathe dusts or mists - if inhalable particles of dusts or mists may occur during use.
		Specific target organ toxicity – single exposure (Chapter 3.8)	1, 2	
		Specific target organ toxicity – prolonged or repeated exposure (Chapter 3.9)	1, 2	
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Reproductive toxicity – effects on or via lactation (Chapter 3.7)	Additional category	
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.
		Respiratory sensitization (Chapter 3.4)	1	
		Skin sensitization (Chapter 3.4)	1	
		Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	
P262	Do not get in eyes, on skin, or on clothing.	Acute toxicity – dermal (Chapter 3.1)	1, 2	
P263	Avoid contact during pregnancy/while nursing.	Reproductive toxicity – effects on or via lactation (Chapter 3.7)	Additional category	

Code (1)	Prevention precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P264	Wash ... thoroughly after handling.	Acute toxicity – oral (Chapter 3.1)	1, 2, 3, 4	... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling.
		Acute toxicity – dermal (Chapter 3.1)	1, 2	
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Skin irritation (Chapter 3.2)	2	
		Eye irritation (Chapter 3.3)	2A, 2B	
		Reproductive toxicity – effects on or via lactation (Chapter 3.7)	Additional category	
		Specific target organ toxicity – single exposure (Chapter 3.8)	1, 2	
		Specific target organ toxicity – prolonged or repeated exposure (Chapter 3.9)	1	
P270	Do not eat, drink or smoke when using this product.	Acute toxicity – oral (Chapter 3.1)	1, 2, 3, 4	
		Acute toxicity – dermal (Chapter 3.1)	1, 2	
		Reproductive toxicity – effects on or via lactation (Chapter 3.7)	Additional category	
		Specific target organ toxicity – single exposure (Chapter 3.8)	1, 2	
		Specific target organ toxicity – prolonged or repeated exposure (Chapter 3.9)	1	
P271	Use only outdoors or in a well-ventilated area.	Acute toxicity – inhalation (Chapter 3.1)	1, 2, 3, 4	
		Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	
P272	Contaminated work clothing should not be allowed out of the workplace.	Skin sensitization (Chapter 3.4)	1	

Code (1)	Prevention precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P273	Avoid release to the environment.	Hazardous to the aquatic environment – acute toxicity (Chapter 4.1)	1, 2, 3	<i>- if this is not the intended use.</i>
		Hazardous to the aquatic environment – chronic toxicity (Chapter 4.1)	1, 2, 3, 4	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	Explosives (Chapter 2.1)	Divisions 1.1, 1.2, 1.3, 1.4, 1.5	Manufacturer/supplier or the competent authority to specify type of equipment. <i>- Specify face protection.</i>
		Flammable liquids (Chapter 2.6)	1, 2, 3, 4	Manufacturer/supplier or the competent authority to specify type of equipment. <i>- Specify protective gloves and eye/face protection.</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	
		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	Manufacturer/supplier or the competent authority to specify type of equipment. <i>- Specify protective gloves/clothing.</i>
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	Manufacturer/supplier or the competent authority to specify type of equipment. <i>- Specify protective gloves/clothing and eye/face protection.</i>

Code (1)	Prevention precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P280	<i>Wear protective gloves/protective clothing/eye protection/face protection.</i> (cont'd)	Skin irritation (Chapter 3.2)	2	Manufacturer/supplier or the competent authority to specify type of equipment. - <i>Specify protective gloves.</i>
		Skin sensitization (Chapter 3.4)	1	
		Severe eye damage (Chapter 3.3)	1	Manufacturer/supplier or the competent authority to specify type of equipment. - <i>Specify eye/face protection.</i>
		Eye irritation (Chapter 3.3)	2A	
P281	Use personal protective equipment as required.	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	
P282	Wear cold insulating gloves/face shield/eye protection.	Gases under pressure (Chapter 2.5)	Refrigerated liquefied gas	
P283	Wear fire/flammable resistant/retardant clothing.	Oxidizing liquids (Chapter 2.13)	1	
		Oxidizing solids (Chapter 2.14)	1	
P284	Wear respiratory protection.	Acute toxicity – inhalation (Chapter 3.1)	1, 2	Manufacturer/supplier or the competent authority to specify equipment.
P285	In case of inadequate ventilation wear respiratory protection.	Respiratory sensitization (Chapter 3.4)	1	Manufacturer/supplier or the competent authority to specify equipment.
P231 + P232	Handle under inert gas. Protect from moisture.	Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1, 2, 3	
P235 + P410	Keep cool. Protect from sunlight.	Self-heating substances and mixtures (Chapter 2.11)	1, 2	

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)
P301	IF SWALLOWED:	Acute toxicity – oral (Chapter 3.1)	1, 2, 3, 4	
		Skin Corrosion (Chapter 3.2)	1A, 1B, 1C	
		Aspiration hazard (Chapter 3.10)	1, 2	
P302	IF ON SKIN:	Pyrophoric liquids (Chapter 2.9)	1	
		Acute toxicity – dermal (Chapter 3.1)	1, 2, 3, 4	
		Skin irritation (Chapter 3.2)	2	
		Skin sensitization (Chapter 3.4)	1	
P303	IF ON SKIN (or hair):	Flammable liquids (Chapter 2.6)	1, 2, 3	
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
P304	IF INHALED:	Acute toxicity – inhalation (Chapter 3.1)	1, 2, 3, 4, 5	
		Skin Corrosion (Chapter 3.2)	1A, 1B, 1C	
		Respiratory sensitization (Chapter 3.4)	1	
		Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	
P305	IF IN EYES:	Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Severe eye damage (Chapter 3.3)	1	
		Eye irritation (Chapter 3.3)	2A, 2B	
P306	IF ON CLOTHING:	Oxidizing liquids (Chapter 2.13)	1	
		Oxidizing solids (Chapter 2.14)	1	
P307	IF exposed:	Specific target organ toxicity – single exposure (Chapter 3.8)	1	
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	

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P309	IF exposed or if you feel unwell:	Specific target organ toxicity – single exposure (Chapter 3.8)	2	
P310	Immediately call a POISON CENTER or doctor/physician.	Acute toxicity – oral (Chapter 3.1)	1, 2, 3	
		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 or doctor/physician.	Acute toxicity – inhalation (Chapter 3.1)	3	
		Respiratory sensitization (Chapter 3.4)	1	
		Specific target organ toxicity – single exposure (Chapter 3.8)	1, 2	
P312	Call a POISON CENTER or doctor/physician if you feel unwell.	Acute toxicity – oral (Chapter 3.1)	4	
		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; narcosis (Chapter 3.8)	3	
P313	Get medical advice/attention.	Skin irritation (Chapter 3.2)	2, 3	
		Eye irritation (Chapter 3.3)	2A, 2B	
		Skin sensitization (Chapter 3.4)	1	
		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	

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P314	Get medical advice/attention if you feel unwell.	Specific target organ toxicity – prolonged or repeated exposure (Chapter 3.9)	1, 2	
P315	Get immediate medical advice/attention.	Gases under pressure (Chapter 2.5)	Refrigerated liquefied gas	
P320	Specific treatment is urgent (see ... on this label).	Acute toxicity – inhalation (Chapter 3.1)	1, 2	... Reference to supplemental first aid instruction. - if immediate administration of antidote is required.
P321	Specific treatment (see ... on this label).	Acute toxicity – oral (Chapter 3.1)	1, 2, 3	... Reference to supplemental first aid instruction. - if immediate administration of antidote is required.
		Acute toxicity – inhalation (Chapter 3.1)	3	... Reference to supplemental first aid instruction. - if immediate specific measures are required.
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	... Reference to supplemental first aid instruction. - manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate.
		Skin irritation (Chapter 3.2)	2	
		Skin sensitization (Chapter 3.4)	1	
		Specific target organ toxicity – single exposure (Chapter 3.8)	1	... Reference to supplemental first aid instruction. - if immediate measures are required.

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P322	Specific measures (see ... on this label).	Acute toxicity – dermal (Chapter 3.1)	1, 2	... Reference to supplemental first aid instruction. - if immediate measures such as specific cleansing agent is advised.
		Acute toxicity – dermal (Chapter 3.1)	3, 4	... Reference to supplemental first aid instruction. - if measures such as specific cleansing agent is advised.
P330	Rinse mouth.	Acute toxicity – oral (Chapter 3.1)	1, 2, 3, 4	
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
P331	Do NOT induce vomiting.	Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Aspiration hazard (Chapter 3.10)	1, 2	
P332	If skin irritation occurs:	Skin irritation (Chapter 3.2)	2, 3	
P333	If skin irritation or rash occurs:	Skin sensitization (Chapter 3.4)	1	
P334	Immerse in cool water/wrap in wet bandages.	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	
P335	Brush off loose particles from skin.	Pyrophoric solids (Chapter 2.10)	1	
		Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1, 2	
P336	Thaw frosted parts with lukewarm water. Do not rub affected area.	Gases under pressure (Chapter 2.5)	Refrigerated liquefied gas	
P337	If eye irritation persists:	Eye irritation (Chapter 3.3)	2A, 2B	
P338	Remove contact lenses, if present and easy to do. Continue rinsing.	Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Severe eye damage (Chapter 3.3)	1	
		Eye irritation (Chapter 3.3)	2A, 2B	

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P340	Remove victim to fresh air and keep at rest in a position comfortable for breathing.	Acute toxicity – inhalation (Chapter 3.1)	1, 2, 3, 4	
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	
P341	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.	Respiratory sensitization (Chapter 3.4)	1	
P342	If experiencing respiratory symptoms:	Respiratory sensitization (Chapter 3.4)	1	
P350	Gently wash with plenty of soap and water.	Acute toxicity – dermal (Chapter 3.1)	1, 2	
P351	Rinse cautiously with water for several minutes.	Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Severe eye damage (Chapter 3.3)	1	
		Eye irritation (Chapter 3.3)	2A, 2B	
P352	Wash with plenty of soap and water.	Acute toxicity – dermal (Chapter 3.1)	3, 4	
		Skin irritation (Chapter 3.2)	2	
		Skin sensitization (Chapter 3.4)	1	
P353	Rinse skin with water/shower.	Flammable liquids (Chapter 2.6)	1, 2, 3	
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
P360	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.	Oxidizing liquids (Chapter 2.13)	1	
		Oxidizing solids (Chapter 2.14)	1	
P361	Remove/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 and wash before reuse.	Skin irritation (Chapter 3.2)	2	

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P363	Wash contaminated clothing before reuse.	Acute toxicity – dermal (Chapter 3.1)	1, 2, 3	
		Acute toxicity – dermal (Chapter 3.1)	4	
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Skin sensitization (Chapter 3.4)	1	
P370	In case of fire:	Explosives (Chapter 2.1)	Divisions 1.1, 1.2, 1.3, 1.4, 1.5	
		Oxidizing gases (Chapter 2.4)	1	
		Flammable liquids (Chapter 2.6)	1, 2, 3, 4	
		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	
P371	In case of major fire and large quantities:	Oxidizing liquids (Chapter 2.13)	1	
		Oxidizing solids (Chapter 2.14)	1	
P372	Explosion risk in case of fire.	Explosives (Chapter 2.1)	Unstable explosives and Divisions 1.1, 1.2, 1.3, 1.4, 1.5	- except if explosives are 1.4S AMMUNITION AND COMPONENTS THEREOF.
P373	DO NOT fight fire when fire reaches explosives.	Explosives (Chapter 2.1)	Unstable explosives and Divisions 1.1, 1.2, 1.3, 1.4, 1.5	
P374	Fight fire with normal precautions from a reasonable distance.	Explosives (Chapter 2.1)	Division 1.4	- if explosives are 1.4S AMMUNITION AND COMPONENTS THEREOF.

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P375	Fight fire remotely due to the risk of explosion.	Self-reactive substances and mixtures (Chapter 2.8)	Types A, B	
		Oxidizing liquids (Chapter 2.13)	1	
		Oxidizing solids (Chapter 2.14)	1	
P376	Stop leak if safe to do so.	Oxidizing gases (Chapter 2.4)	1	
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.	Flammable gases (Chapter 2.2)	1, 2	
P378	Use ... for extinction.	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	
P380	Evacuate area.	Explosives (Chapter 2.1)	Unstable explosives	
		Explosives (Chapter 2.1)	Divisions 1.1, 1.2, 1.3, 1.4, 1.5	
		Self-reactive substances and mixtures (Chapter 2.8)	Types A, B	
		Oxidizing liquids (Chapter 2.13)	1	
		Oxidizing solids (Chapter 2.14)	1	
P381	Eliminate all ignition sources if safe to do so.	Flammable gases (Chapter 2.2)	1, 2	

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P390	Absorb spillage to prevent material damage.	Substances and mixtures Corrosive to metals (Chapter 2.16)	1	
P391	Collect spillage.	Hazardous to the aquatic environment – acute toxicity (Chapter 4.1)	1	
		Hazardous to the aquatic environment – chronic toxicity (Chapter 4.1)	1, 2	
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.	Acute toxicity – oral (Chapter 3.1)	1, 2, 3	
		Aspiration hazard (Chapter 3.10)	1, 2	
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.	Acute toxicity – oral (Chapter 3.1)	4	
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.	Skin Corrosion (Chapter 3.2)	1A, 1B, 1C	
P302 + P334	IF ON SKIN: Immerse in cool water/wrap in wet bandages.	Pyrophoric liquids (Chapter 2.9)	1	
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.	Acute toxicity – dermal (Chapter 3.1)	1, 2	
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.	Acute toxicity – dermal (Chapter 3.1)	3, 4	
		Skin irritation (Chapter 3.2)	2	
		Skin sensitization (Chapter 3.4)	1	
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	

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P304 + P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.	Acute toxicity – inhalation (Chapter 3.1)	5	
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	Acute toxicity – inhalation (Chapter 3.1)	1, 2, 3, 4	
		Skin Corrosion (Chapter 3.2)	1A, 1B, 1C	
		Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	
P304 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.	Respiratory sensitization (Chapter 3.4)	1	
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Severe eye damage (Chapter 3.3)	1	
		Eye irritation (Chapter 3.3)	2A, 2B	
P306 + P360	IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.	Oxidizing liquids (Chapter 2.13)	1	
		Oxidizing solids (Chapter 2.14)	1	
P307 + P311	IF exposed: Call a POISON CENTER or doctor/physician.	Specific target organ toxicity – single exposure (Chapter 3.8)	1	
P308 + P313	IF exposed or concerned: Get medical advice/attention.	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	

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P309 + P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.	Specific target organ toxicity – single exposure (Chapter 3.8)	2	
P332 + P313	If skin irritation occurs: Get medical advice/attention.	Skin irritation (Chapter 3.2)	2, 3	
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.	Skin sensitization (Chapter 3.4)	1	
P335 + P334	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.	Pyrophoric solids (Chapter 2.10)	1	
		Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1, 2	
P337 + P313	If eye irritation persists: Get medical advice/attention.	Eye irritation (Chapter 3.3)	2A, 2B	
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.	Respiratory sensitization (Chapter 3.4)	1	
P370 + P376	In case of fire: Stop leak if safe to do so.	Oxidizing gases (Chapter 2.4)	1	
P370 + P378	In case of fire: Use ... for extinction.	Flammable liquids (Chapter 2.6)	1, 2, 3, 4	... Manufacturer/supplier or the competent authority to specify appropriate media. - if water increases risk.
		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	

Code (1)	Response precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P370 + P378	<i>In case of fire: Use ... for extinction</i> (cont'd)	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	
P370 + P380	In case of fire: Evacuate area.	Explosives (Chapter 2.1)	Divisions 1.1, 1.2, 1.3, 1.4, 1.5	
P370 + P380 + P375	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.	Self-reactive substances and mixtures (Chapter 2.8)	Types A, B	
P371 + P380 + P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.	Oxidizing liquids (Chapter 2.13)	1	
		Oxidizing solids (Chapter 2.14)	1	

Table A3.2.4 Codification of storage precautionary statements

Code (1)	Storage precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P401	Store ...	Explosives (Chapter 2.1)	Unstable explosives and Divisions 1.1, 1.2, 1.3, 1.4, 1.5	... in accordance with local/regional/national/international regulations (to be specified).
P402	Store in a dry place.	Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1, 2, 3	

Code (1)	Storage precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P403	Store in a well-ventilated place.	Flammable gases (Chapter 2.2)	1, 2	
		Oxidizing gases (Chapter 2.4)	1	
		Gases under pressure (Chapter 2.5)	Compressed gas	
			Liquefied gas	
			Refrigerated Liquefied gas	
			Dissolved gas	
		Flammable liquids (Chapter 2.6)	1, 2, 3, 4	
		Self-reactive substances and mixtures (Chapter 2.8)	Types A, B, C, D, E, F	
		Acute toxicity – inhalation (Chapter 3.1)	1, 2, 3	<i>- if product is volatile so as to generate hazardous atmosphere.</i>
		Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	
P404	Store in a closed container.	Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1, 2, 3	
P405	Store locked up.	Acute toxicity – oral (Chapter 3.1)	1, 2, 3	
		Acute toxicity – dermal (Chapter 3.1)	1, 2, 3	
		Acute toxicity – inhalation (Chapter 3.1)	1, 2, 3	
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Germ cell mutagenicity (Chapter 3.5)	1A, 1B, 2	
		Carcinogenicity (Chapter 3.6)	1A, 1B, 2	
		Reproductive toxicity (Chapter 3.7)	1A, 1B, 2	

Code (1)	Storage precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P405	Store locked up. (cont'd)	Specific target organ toxicity – single exposure (Chapter 3.8)	1, 2	
		Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	
		Aspiration hazard (Chapter 3.10)	1, 2	
P406	Store in corrosive resistant/... container with a resistant inner liner.	Substances and mixtures corrosive to metals (Chapter 2.16)	1	... Manufacturer/supplier or the competent authority to specify other compatible materials.
P407	Maintain air gap between stacks/pallets.	Self-heating substances and mixtures (Chapter 2.11)	1, 2	
P410	Protect from sunlight.	Flammable aerosols (Chapter 2.3)	1, 2	
		Gases under pressure (Chapter 2.5)	Compressed gas	
			Liquefied gas	
			Dissolved gas	
		Self-heating substances and mixtures (Chapter 2.11)	1, 2	
P411	Store at temperatures not exceeding ...°C/...°F.	Self-reactive substances and mixtures (Chapter 2.8)	Types A, B, C, D, E, F	... Manufacturer/supplier or the competent authority to specify temperature.
		Organic peroxides (Chapter 2.15)	Types A, B, C, D, E, F	
P412	Do not expose to temperatures exceeding 50 °C/ 122 °F.	Flammable aerosols (Chapter 2.3)	1, 2	

Code (1)	Storage precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P413	Store bulk masses greater than ... kg/...lbs at temperatures not exceeding ...°C/...°F.	Self-heating substances and mixtures (Chapter 2.11)	1, 2	... Manufacturer/supplier or the competent authority to specify mass and temperature.
P420	Store away from other materials.	Self-reactive substances and mixtures (Chapter 2.8)	Types A, B, C, D, E, F	
		Self-heating substances and mixtures (Chapter 2.11)	1, 2	
		Organic peroxides (Chapter 2.15)	Types A, B, C, D, E, F	
P422	Store contents under ...	Pyrophoric liquids (Chapter 2.9)	1	... Manufacturer/supplier or the competent authority to specify appropriate liquid or inert gas.
		Pyrophoric solids (Chapter 2.10)	1	
P402 + P404	Store in a dry place. Store in a closed container.	Substances and mixtures which, in contact with water, emit flammable gases (Chapter 2.12)	1, 2, 3	
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.	Acute toxicity – inhalation (Chapter 3.1)	1, 2, 3	- if product is volatile so as to generate hazardous atmosphere.
		Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	
P403 + P235	Store in a well-ventilated place. Keep cool.	Flammable liquids (Chapter 2.6)	1, 2, 3, 4	
		Self-reactive substances and mixtures (Chapter 2.8)	Types A, B, C, D, E, F	
P410 + P403	Protect from sunlight. Store in a well-ventilated place.	Gases under pressure (Chapter 2.5)	Compressed gas	
			Liquefied gas	
			Dissolved gas	

Code (1)	Storage precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.	Flammable aerosols (Chapter 2.3)	1, 2	
P411 + P235	Store at temperatures not exceeding ...°C/...°F. Keep cool.	Organic peroxides (Chapter 2.15)	Types A, B, C, D, E, F	... Manufacturer/supplier or the competent authority to specify temperature.

Table A3.2.5 Codification of disposal precautionary statements

Code (1)	Disposal precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
P501	Dispose of contents/container to ...	Explosives (Chapter 2.1)	Unstable explosives and Divisions 1.1, 1.2, 1.3, 1.4, 1.5	... in accordance with local/regional/national/international regulations (to be specified).
		Flammable liquids (Chapter 2.6)	1, 2, 3, 4	
		Self-reactive substances and mixtures (Chapter 2.8)	Types A, B, C, D, E, F	
		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 – oral (Chapter 3.1)	1, 2, 3, 4	
		Acute toxicity – dermal (Chapter 3.1)	1, 2, 3, 4	
		Acute toxicity – inhalation (Chapter 3.1)	1, 2	
		Skin corrosion (Chapter 3.2)	1A, 1B, 1C	
		Respiratory sensitization (Chapter 3.4)	1	
		Skin sensitization (Chapter 3.4)	1	
		Germ cell mutagenicity (Chapter 3.5)	1A, 1B, 2	
		Carcinogenicity (Chapter 3.6)	1A, 1B, 2	
		Reproductive toxicity (Chapter 3.7)	1A, 1B, 2	
		Specific target organ toxicity – single exposure (Chapter 3.8)	1, 2	

Code (1)	Disposal precautionary statements (2)	Hazard class (3)	Hazard category (4)	Conditions for use (5)
<i>P501</i>	<i>Dispose of contents/container to ... (cont'd)</i>	Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8)	3	
		Specific target organ toxicity – single exposure; narcosis (Chapter 3.8)	3	
		Specific target organ toxicity – prolonged or repeated exposure (Chapter 3.9)	1, 2	
		Aspiration hazard (Chapter 3.10)	1, 2	
		Hazardous to the aquatic environment – acute toxicity (Chapter 4.1)	1, 2, 3	
		Hazardous to the aquatic environment – chronic toxicity (Chapter 4.1)	1, 2, 3, 4	

Annex 3

SECTION 3

USE OF PRECAUTIONARY STATEMENTS

A3.3.1 Introduction

A3.3.1.1 This section provides guidance on the use of precautionary statements consistent with the GHS, including advice on the selection of appropriate statements for each GHS hazard class and category.

A3.3.1.2 The starting point for assigning precautionary statements is the hazard classification of the chemical product. The system of classifying hazards in the GHS is based on the intrinsic properties of the chemicals involved (see 1.3.2.2.1). In some systems, however, labelling may not be required for chronic hazards on consumer product labels, if information shows that the respective risks can be excluded under conditions of normal handling, normal use or foreseeable misuse (see Annex 5). If certain hazard statements are not required then the corresponding precautionary statements are also not necessary (see A5.1.1).

A3.3.1.3 The guidance for assigning the phrases in this section has been developed to provide the essential minimum phrases linking precautionary statements with relevant GHS hazard classification criteria and type of hazard.

A3.3.1.4 Existing precautionary statements have been used to the maximum extent as the basis for the development of this section. These existing systems have included the IPCS International Chemical Safety Card (ICSC) Compilers Guide, the American National Standards (ANSI Z129.1), the EU classification and labelling directives, the Emergency Response Guidebook (ERG 2004), and U.S. Environmental Protection Agency Pesticide Label Review Manual.

A3.3.1.5 The goal of this section is to promote a more consistent use of precautionary statements. Their use will reinforce safe handling procedures and will enable the key concepts and approaches to be emphasized in training and education activities.

A3.3.1.6 This section should be seen as a living document and therefore subject to further refinement and development over time. The basic concepts of the matrix and the philosophy below will remain.

A3.3.2 Allocation of precautionary statements

A3.3.2.1 This section sets out a matrix which guides the selection of appropriate precautionary statements. It includes elements for all categories of precautionary action. All specific elements relating to particular hazard classes should be used. General elements not linked in particular to a certain hazard class or category should also be used where relevant.

A3.3.2.2 To provide flexibility in the application of precautionary phrases, a combination of statements is encouraged to save label space and improve their readability. Combination of phrases can also be useful for different types of hazard where the precautionary behaviour is similar, e.g. **"Keep away from heat, sparks and open flame and store in a cool well-ventilated place"**.

A3.3.2.3 Precautionary statements should appear on GHS labels along with the GHS hazard communication elements (pictograms, signal words and hazard statements). Additional supplemental information, such as directions for use, may also be provided at the discretion of the manufacturer/supplier and/or competent authority (see Chapter 1.2 and Chapter 1.4, paragraph 1.4.6.3). For some specific chemicals, supplementary first aid, treatment measures or specific antidotes or cleansing materials may be required. Poisons Centres and/or medical practitioners or specialist advice should be sought in such situations and included on labels.

A3.3.3 General precautionary measures

A3.3.3.1 General precautionary measures should be adopted for all substances and mixtures which are classified as hazardous to human health or the environment. To this end, the needs of and the information sources available to three groups of users or applicators should be taken into account: the general public, the commercial user and the industrial worker.

A3.3.3.2 The presumed observation of precautionary label information, specific safety guidelines, and the safety data sheet for each product before use are part of the labelling requirements and occupational health and safety procedures.

A3.3.3.3 In order to correctly implement precautionary measures concerning prevention, response, storage and disposal, it is also necessary to have information on the composition of products at hand, so that information shown on the container, label and safety data sheet can be taken into account when asking for further specialist advice.

A3.3.3.4 The following general precautionary statements on the GHS label are appropriate under the given conditions:

General public	GHS label, Supplemental label information	P102 P103 P101	Keep out of reach of children. Read label before use. If medical advice is needed: Have product container or label at hand.
Industrial worker	GHS label, Supplemental label information, Safety Data Sheet, workplace Instructions		<i>none of the above</i>

A3.3.4 Structure of the precautionary statements matrix

A3.3.4.1 The tables making up the matrix show the core part of the precautionary statements in bold print. This is the text, except as otherwise specified, that should appear on the label. However, it is not necessary to insist on identical sets of words in all situations. Derogations from the recommended labelling statements are at the discretion of competent authorities. In all cases, clear plain language is essential to convey information on precautionary behaviour.

A3.3.4.2 Text in italics that starts with “– *if*” or “– *specify*” is intended to be an explanatory conditional note for the application of the precautionary statements and is not intended to appear on the label.

A3.3.4.3 When a backslash or diagonal mark [/] appears in a precautionary statement text, it indicates that a choice has to be made between the words they separate. In such cases, the manufacturer or supplier can choose or competent authorities may prescribe the most appropriate phrase(s). For example, "**Keep away from heat/sparks/open flames/hot surfaces**" could read "**Keep away from heat**".

A3.3.4.4 When three full stops [...] appear in a precautionary statement text, they indicate that all applicable conditions are not listed. In such cases the manufacturer or supplier can choose, or the competent authorities may prescribe the other conditions to be specified. For example, in the statement “**Use explosion-proof electrical/ventilating/lighting/.../equipment**”, the use of “...” indicates that other equipment may need to be specified.

A3.3.4.5 In the majority of cases, the recommended precautionary statements are independent, e.g. the phrases for explosive hazard do not modify those related to certain health hazards and products that are classified for both hazard classes should bear appropriate precautionary statements for both.

A3.3.4.6 Where a substance or mixture is classified for a number of health hazards, generally the most stringent set of precautionary statements should be selected. This applies mainly for the preventive measures. With respect to phrases concerning "Response", rapid action may be crucial. For example, if a chemical is carcinogenic and acutely toxic then the first aid measures for acute toxicity will take precedence over those for longer term effects. In addition, medical attention to delayed health effects may be required in cases of incidental exposure, even if not associated with immediate symptoms of intoxication.

A3.3.4.7 To protect people with different reading abilities, it might be useful to include both precautionary pictograms and precautionary statements in order to convey information in more than one way (see 1.4.4.1 (a)). It should be noted, however, that the protective effect of pictograms is limited and the examples in this annex do not cover all precautionary aspects to be addressed. While pictograms can be useful, they can be misinterpreted and are not a substitute for training.

A3.3.5 Matrix of precautionary statements by hazard class/category

A3.3.5.1 This matrix lists the recommended precautionary statements for each hazard class and hazard category of the GHS by type of precautionary statement (see A3.2.2.1) except for general precautionary statements. In each case the precautionary statement has the applicable code on the line immediately above.

EXPLOSIVES (CHAPTER 2.1)

Symbol
Exploding bomb



Hazard category

Unstable Explosive

Signal word

Danger

Hazard statement

Unstable Explosive H200

Precautionary statements			
Prevention	Response	Storage	Disposal
<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P281 Use personal protective equipment as required.</p>	<p>P372 Explosion risk in case of fire.</p> <p>P373 DO NOT fight fire when fire reaches explosives.</p> <p>P380 Evacuate area.</p>	<p>P401 Store in accordance with local/regional/national/international regulations (to be specified).</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p>

EXPLOSIVES (CHAPTER 2.1)

Symbol
Exploding bomb



Hazard category	Signal word	Hazard statement
Division 1.1	Danger	Explosive; mass explosion hazard H201
Division 1.2	Danger	Explosive; severe projection hazard H202
Division 1.3	Danger	Explosive; fire, blast or projection hazard H203

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>P230 Keep wetted with Manufacturer/supplier or the competent authority to specify appropriate material. - <i>if drying out increases explosion hazard, except as needed for manufacturing or operating processes (e.g. nitrocellulose).</i></p> <p>P240 Ground/bond container and receiving equipment. - <i>if the explosive is electrostatically sensitive.</i></p> <p>P250 Do not subject to grinding/shock/.../friction. ...Manufacturer/supplier or the competent authority to specify applicable rough handling.</p> <p>P280 Wear face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P370 + P380 In case of fire: Evacuate area.</p> <p>P372 Explosion risk in case of fire.</p> <p>P373 DO NOT fight fire when fire reaches explosives.</p>	<p>P401 Store in accordance with local/regional/national/international regulations (to be specified).</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p>

EXPLOSIVES (CHAPTER 2.1)

Symbol
Exploding bomb



Hazard category	Signal word	Hazard statement
Division 1.4	Warning	Fire or projection hazard H204

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 the explosive is electrostatically sensitive.</i></p> <p>P250 Do not subject to grinding/shock/.../friction. ...Manufacturer/supplier or the competent authority to specify applicable rough handling.</p> <p>P280 Wear face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P370 + P380 In case of fire: Evacuate area.</p> <p>P372 Explosion risk in case of fire. - except if <i>explosives are 1.4S AMMUNITION AND COMPONENTS THEREOF.</i></p> <p>P373 DO NOT fight fire when fire reaches explosives.</p> <p>P374 Fight fire with normal precautions from a reasonable distance. - <i>if explosives are 1.4S AMMUNITION AND COMPONENTS THEREOF.</i></p>	<p>P401 Store in accordance with local/regional/national/international regulations (to be specified).</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p>

EXPLOSIVES (CHAPTER 2.1)

Symbol <i>No symbol</i>

Hazard category	Signal word	Hazard statement
Division 1.5	Danger	May mass explode in fire H205

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>P230 Keep wetted with Manufacturer/supplier or the competent authority to specify appropriate material. - <i>if drying out increases explosion hazard, except as needed for manufacturing or operating processes (e.g. nitrocellulose).</i></p> <p>P240 Ground/bond container and receiving equipment. - <i>if the explosive is electrostatically sensitive.</i></p> <p>P250 Do not subject to grinding/shock/.../friction. ...Manufacturer/supplier or the competent authority to specify applicable rough handling.</p> <p>P280 Wear face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P370 + P380 In case of fire: Evacuate area.</p> <p>P372 Explosion risk in case of fire.</p> <p>P373 DO NOT fight fire when fire reaches explosives.</p>	<p>P401 Store in accordance with local/regional/national/international regulations (to be specified).</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p>

FLAMMABLE GASES
(CHAPTER 2.2)

Symbol
Flame



Hazard category	Signal word	Hazard statement
1	Danger	Extremely flammable gas H220

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).	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 a well-ventilated place.	

FLAMMABLE GASES (CHAPTER 2.2)

Symbol <i>No symbol</i>

Hazard category	Signal word	Hazard statement
2	Warning	Flammable gas H221

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).	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 a well-ventilated place.	

FLAMMABLE AEROSOLS (CHAPTER 2.3)

Symbol
Flame



Hazard category	Signal word	Hazard statement
1	Danger	Extremely flammable aerosol H222
2	Warning	Flammable aerosol H223

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>P211 Do not spray on an open flame or other ignition source.</p> <p>P251 Pressurized container: Do not pierce or burn, even after use.</p>		<p>P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.</p>	

OXIDIZING GASES (CHAPTER 2.4)

Symbol Flame over circle



Hazard category

1

Signal word

Danger

Hazard statement

May cause or intensify fire; oxidizer H270

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 reduction valves free from grease and oil.	P370 + P376 In case of fire: Stop leak if safe to do so.	P403 Store in a well-ventilated place.	

GASES UNDER PRESSURE (CHAPTER 2.5)

Symbol
Gas cylinder



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

Precautionary statements			
Prevention	Response	Storage	Disposal
		P410 + P403 Protect from sunlight. Store in a well-ventilated place.	

GASES UNDER PRESSURE (CHAPTER 2.5)

Symbol Gas cylinder

Hazard category	Signal word	Hazard statement
Refrigerated liquefied gas	Warning	Contains refrigerated gas; may cause cryogenic burns or injury H281



Precautionary statements			
Prevention	Response	Storage	Disposal
P282 Wear cold insulating gloves/face shield/eye protection.	P336 Thaw frosted parts with lukewarm water. Do not rub affected area. P315 Get immediate medical advice/attention.	P403 Store in a well-ventilated place.	

FLAMMABLE LIQUIDS (CHAPTER 2.6)

Symbol
Flame



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

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>P233 Keep container tightly closed.</p> <p>P240 Ground/bond container and receiving equipment. - <i>if electrostatically sensitive material is for reloading.</i> - <i>if product is volatile so as to generate hazardous atmosphere.</i></p> <p>P241 Use explosion-proof electrical/ventilating/lighting/.../equipment. ... Manufacturer/supplier or the competent authority to specify other equipment.</p> <p>P242 Use only non-sparking tools.</p> <p>P243 Take precautionary measures against static discharge.</p> <p>P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i></p>	<p>P403 + P235 Store in a well-ventilated place. Keep cool.</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p>

FLAMMABLE LIQUIDS (CHAPTER 2.6)

Symbol <i>No symbol</i>

Hazard category

4

Signal word

Warning

Hazard statement

Combustible liquid H227

Precautionary statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from flames and hot surfaces. – No smoking.</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 ... for extinction. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i></p>	<p>P403 + P235 Store in a well-ventilated place. Keep cool.</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p>

FLAMMABLE SOLIDS (CHAPTER 2.7)

Symbol
Flame



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

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 ... for extinction. ... 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

Type A

Signal word

Danger

Hazard statement

Heating may cause an explosion H240



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 ... for extinction. ... 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)

Hazard category

Type B

Signal word

Danger

Hazard statement

Heating may cause a fire or explosion H241

Symbol
Exploding 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 ... for extinction. ... 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	Heating may cause a fire H242
Type D	Danger	Heating may cause a fire H242
Type E	Warning	Heating may cause a fire H242
Type F	Warning	Heating may cause a fire H242

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 ... for extinction. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i></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>

PYROPHORIC LIQUIDS (CHAPTER 2.9)

Symbol
Flame



Hazard category

1

Signal word

Danger

Hazard statement

Catches fire spontaneously if exposed to air H250

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>P222 Do not allow contact with air.</p> <p>P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P302 + P334 IF ON SKIN: Immerse in cool water/wrap in wet bandages.</p> <p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i></p>	<p>P422 Store contents under Manufacturer/supplier or the competent authority to specify appropriate liquid or inert gas.</p>	

PYROPHORIC SOLIDS (CHAPTER 2.10)

Symbol
Flame



Hazard category

1

Signal word

Danger

Hazard statement

Catches fire spontaneously if exposed to air H250

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>P222 Do not allow contact with air.</p> <p>P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P335 + P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.</p> <p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i></p>	<p>P422 Store contents under Manufacturer/supplier or the competent authority to specify appropriate liquid or inert gas.</p>	

**SELF-HEATING SUBSTANCES AND MIXTURES
(CHAPTER 2.11)**

Symbol
Flame



Hazard category	Signal word	Hazard statement
1	Danger	Self-heating; may catch fire H251
2	Warning	Self-heating in large quantities; may catch fire H252

Precautionary statements			
Prevention	Response	Storage	Disposal
P235 + P410 Keep cool. Protect from sunlight. P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment.		P407 Maintain air gap between stacks/pallets. P413 Store bulk masses greater than ... kg/...lbs at temperatures not exceeding ...°C/...°F. ... Manufacturer/supplier or the competent authority to specify mass and temperature. P420 Store away from other materials.	

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

Symbol
Flame



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

Precautionary statements			
Prevention	Response	Storage	Disposal
<p>P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.</p> <p>P231 + P232 Handle under inert gas. Protect from moisture.</p> <p>P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P335 + P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.</p> <p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier or the competent authority to specify appropriate media. - <i>if water increases risk.</i></p>	<p>P402 + P404 Store in a dry place. Store in a closed container.</p>	<p>P501 Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified).</p>

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

Symbol
Flame



Hazard category

3

Signal word

Warning

Hazard statement

In contact with water releases flammable gases H261

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

OXIDIZING LIQUIDS (CHAPTER 2.13)

Symbol
Flame over circle



Hazard category

1

Signal word

Danger

Hazard statement

May cause fire or explosion; strong oxidizer H271

Precautionary statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat.</p> <p>P220 Keep/Store 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/flame 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 ... for extinction. ... 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 LIQUIDS (CHAPTER 2.13)

Symbol Flame over circle



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

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 ... for extinction. ... 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)

Symbol
Flame over circle



Hazard category

1

Signal word

Danger

Hazard statement

May cause fire or explosion; strong oxidizer H271

Precautionary statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat.</p> <p>P220 Keep/Store 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 ... for extinction. ... 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)

Symbol Flame over circle



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

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 ... for extinction. ... 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).

ORGANIC PEROXIDES (CHAPTER 2.15)

Symbol
Exploding bomb

Hazard category

Type A

Signal word

Danger

Hazard statement

Heating may cause an explosion H240



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 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>P411 + P235 Store at temperatures not exceeding ...°C/...°F. Keep cool. ... Manufacturer/supplier or the competent authority to specify temperature.</p> <p>P410 Protect from sunlight.</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>

ORGANIC PEROXIDES (CHAPTER 2.15)

Hazard category

Type B

Signal word

Danger

Hazard statement

Heating may cause a fire or explosion H241

Symbol
Exploding 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 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>P411 + P235 Store at temperatures not exceeding ...°C/...°F. Keep cool. ... Manufacturer/supplier or the competent authority to specify temperature.</p> <p>P410 Protect from sunlight.</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>

ORGANIC PEROXIDES (CHAPTER 2.15)

Symbol
Flame



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

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 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>P411 + P235 Store at temperatures not exceeding ...°C/...°F. Keep cool. ... Manufacturer/supplier or the competent authority to specify temperature.</p> <p>P410 Protect from sunlight.</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>

CORROSIVE TO METALS
(CHAPTER 2.16)

Symbol

Corrosion



Hazard category

1

Signal word

Warning

Hazard statement

May be corrosive to metals H290

Precautionary statements			
Prevention	Response	Storage	Disposal
P234 Keep only in original container.	P390 Absorb spillage to prevent material-damage.	P406 Store in corrosive resistant/... container with a resistant inner liner. ... Manufacturer/supplier or the competent authority to specify other compatible materials.	

ACUTE TOXICITY - ORAL (CHAPTER 3.1)

Symbol
Skull and crossbones



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

Precautionary statements			
Prevention	Response	Storage	Disposal
<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>P270 Do not eat, drink or smoke when using this product.</p>	<p>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P321 Specific treatment (see ... on this label). ... Reference to supplemental first aid instruction. - <i>if immediate administration of antidote is required.</i></p> <p>P330 Rinse mouth.</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 - ORAL (CHAPTER 3.1)

Symbol
Skull and crossbones



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

Precautionary statements			
Prevention	Response	Storage	Disposal
<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>P270 Do not eat, drink or smoke when using this product.</p>	<p>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P321 Specific treatment (see ... on this label). ... Reference to supplemental first aid instruction. - <i>if immediate administration of antidote is required.</i></p> <p>P330 Rinse mouth.</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 - ORAL **(CHAPTER 3.1)**

Symbol Exclamation mark



Hazard category

4

Signal word

Warning

Hazard statement

Harmful if swallowed H302

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 or doctor/physician if you feel unwell. 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
No symbol

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

Precautionary statements			
Prevention	Response	Storage	Disposal
	P312 Call a POISON CENTER or doctor/ physician if you feel unwell.		

ACUTE TOXICITY - DERMAL (CHAPTER 3.1)

Symbol
Skull and crossbones



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

Precautionary statements			
Prevention	Response	Storage	Disposal
<p>P262 Do not get in eyes, on skin, or on clothing.</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>P270 Do not eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/protective clothing. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</p> <p>P322 Specific measures (see ... on this label). ... Reference to supplemental first aid instruction. - <i>if immediate measures such as specific cleansing agent is advised.</i></p> <p>P361 Remove/Take off immediately all contaminated clothing.</p> <p>P363 Wash contaminated clothing before reuse.</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 - DERMAL (CHAPTER 3.1)

Symbol Skull and crossbones



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

Precautionary statements			
Prevention	Response	Storage	Disposal
<p>P280 Wear protective gloves/protective clothing. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P322 Specific measures (see ... on this label). ... Reference to supplemental first aid instruction. - <i>if measures such as specific cleansing agent is advised.</i></p> <p>P361 Remove/Take off immediately all contaminated clothing.</p> <p>P363 Wash contaminated clothing before reuse.</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 - DERMAL (CHAPTER 3.1)

Symbol Exclamation mark

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



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 soap and water. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P322 Specific measures (see ... on this label). ... Reference to supplemental first aid instruction. - <i>if measures such as specific cleansing agent is advised.</i> P363 Wash contaminated clothing 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
No symbol

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

Precautionary statements			
Prevention	Response	Storage	Disposal
	P312 Call a POISON CENTER or doctor/ physician if you feel unwell.		

ACUTE TOXICITY - INHALATION (CHAPTER 3.1)

Symbol
Skull and crossbones



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

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 Wear respiratory protection. Manufacturer/supplier or the competent authority to specify equipment.</p>	<p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</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 so 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	Toxic if inhaled H331

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. P271 Use only outdoors or in a well-ventilated area.	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P311 Call a POISON CENTER or doctor/physician. 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 contents/container to in accordance with local/regional/national/international regulations (to be specified).

ACUTE TOXICITY - INHALATION (CHAPTER 3.1)

Symbol Exclamation mark

Hazard category

4

Signal word

Warning

Hazard statement

Harmful if inhaled H332



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.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p>	<p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p>		

ACUTE TOXICITY - INHALATION **(CHAPTER 3.1)**

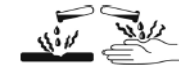
<p>Symbol <i>No symbol</i></p>

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

Precautionary statements			
Prevention	Response	Storage	Disposal
	P304 + P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.		

SKIN CORROSION/IRRITATION (CHAPTER 3.2)

Symbol
Corrosion



Hazard category

1A to 1C

Signal word

Danger

Hazard statement

Causes severe skin burns and eye damage H314

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): Remove/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 victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</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
2

Signal word
Warning

Hazard statement
Causes skin irritation H315

Precautionary statements			
Prevention	Response	Storage	Disposal
<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. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</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>P332 + P313 If skin irritation occurs: Get medical advice/attention.</p> <p>P362 Take off contaminated clothing and wash before reuse.</p>		

SKIN CORROSION/IRRITATION (CHAPTER 3.2)

Symbol <i>No symbol</i>

Hazard category	Signal word	Hazard statement
3	Warning	Causes mild skin irritation H316

Precautionary statements			
Prevention	Response	Storage	Disposal
	P332 + P313 If skin irritation occurs: Get medical advice/attention.		

EYE DAMAGE/IRRITATION
(CHAPTER 3.3)

Symbol
Corrosion



Hazard category

1

Signal word

Danger

Hazard statement

Causes serious eye damage H318

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 or doctor/physician.		

EYE DAMAGE/IRRITATION (CHAPTER 3.3)

Symbol Exclamation mark

Hazard category	Signal word	Hazard statement
2A	Warning	Causes serious eye irritation H319



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 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. P337 + P313 If eye irritation persists: Get medical advice/attention.		

EYE DAMAGE/IRRITATION (CHAPTER 3.3)

Symbol <i>No symbol</i>

Hazard category	Signal word	Hazard statement
2B	Warning	Causes eye irritation H320

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.	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/attention.		

SENSITIZATION - RESPIRATORY (CHAPTER 3.4)

Symbol Health hazard

Hazard category

1

Signal word

Danger

Hazard statement

May cause allergy or asthma symptoms or breathing difficulties if inhaled H334



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.</p> <p>P285 In case of inadequate ventilation wear respiratory protection. Manufacturer/supplier or the competent authority to specify equipment.</p>	<p>P304 + P341 IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.</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	Warning	May cause an allergic skin reaction H317

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.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P280 Wear protective gloves. Manufacturer/supplier or the competent authority to specify type of equipment.</p>	<p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.</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>P363 Wash contaminated clothing before reuse.</p>		<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p>

GERM CELL MUTAGENICITY
(CHAPTER 3.5)

Symbol
Health hazard



Hazard category	Signal word	Hazard statement
1	Danger	May cause genetic defects <...> H340
2	Warning	Suspected of causing genetic defects <...> H341 <...> (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. P281 Use personal protective equipment as required.	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	May cause cancer <...> H350
2	Warning	Suspected of causing cancer <...> H351 <...> (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. P281 Use personal protective equipment as required.	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).

REPRODUCTIVE TOXICITY (CHAPTER 3.7)

Symbol
Health hazard



Hazard category	Signal word	Hazard statement
1	Danger	May damage fertility or the unborn child <...> <<...>> H360
2	Warning	Suspected of damaging fertility or the unborn child <...> <<...>> H361 <...> (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. P281 Use personal protective equipment as required.	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).

**REPRODUCTIVE TOXICITY
(CHAPTER 3.7)
(EFFECTS ON OR VIA LACTATION)**

Symbol <i>No symbol</i>

Hazard category <i>(additional)</i>	Signal word <i>No signal word</i>	Hazard statement May cause harm to breast-fed children H362
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Precautionary statements			
Prevention	Response	Storage	Disposal
P201 Obtain special instructions before use. P260 Do not breathe dusts or mists. <i>- if inhalable particles of dusts or mists may occur during use.</i> P263 Avoid contact during pregnancy/while nursing. P264 Wash ... thoroughly after handling. <i>... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling.</i> P270 Do not eat, drink or smoke when using this product.	P308 + P313 IF exposed or concerned: Get medical advice/attention.		

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (CHAPTER 3.8)

Symbol
Health hazard



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

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>P264 Wash ... thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p>	<p>P307 + P311 IF exposed: Call a POISON CENTER or doctor/physician.</p> <p>P321 Specific treatment (see ... on this label). ... Reference to supplemental first aid instruction. - if immediate measures are required.</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>

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (CHAPTER 3.8)

Hazard category
2

Signal word
Warning

Hazard statement
May cause damage to organs <...> <<...>>. H371
<...> (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)

Symbol
Health hazard



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>P264 Wash ... thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p>	<p>P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.</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>

**SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
(CHAPTER 3.8)**

Hazard category
3

Signal word
Warning

Hazard statement
May cause respiratory irritation; or H335
May cause drowsiness and dizziness H336

Symbol Exclamation mark



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. P271 Use only outdoors or in a well-ventilated area.	P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell.	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).

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (CHAPTER 3.9)

Symbol
Health hazard



Hazard category	Signal word	Hazard statement
1	Danger	<p>Causes damage to organs <...> through prolonged or repeated exposure <<...>>. H372</p> <p><...> (state all organs affected, if known)</p> <p><<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>

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>P264 Wash ... thoroughly after handling. ... Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p>	<p>P314 Get medical advice/attention if you feel unwell.</p>		<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p>

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (CHAPTER 3.9)

Symbol Health hazard

Hazard category	Signal word	Hazard statement
2	Warning	May cause damage to organs <...> through prolonged or repeated exposure <<...>>. H373 <...> (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.	P314 Get medical advice/attention if you feel unwell.		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	May be fatal if swallowed and enters airways H304
2	Warning	May be harmful if swallowed and enters airways H305

Precautionary statements			
Prevention	Response	Storage	Disposal
	P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. 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).

HAZARDOUS TO THE AQUATIC ENVIRONMENT - ACUTE HAZARD (CHAPTER 4.1)

Symbol
Environment

Hazard category

1

Signal word

Warning

Hazard statement

Very toxic to aquatic life H400



Precautionary statements			
Prevention	Response	Storage	Disposal
P273 Avoid release to the environment. - <i>if this is not the intended use.</i>	P391 Collect spillage.		P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified).

HAZARDOUS TO THE AQUATIC ENVIRONMENT - ACUTE HAZARD (CHAPTER 4.1)

Symbol <i>No symbol</i>

Hazard category	Signal word	Hazard statement
2	<i>No signal word</i>	Toxic to aquatic life H401
3	<i>No signal word</i>	Harmful to aquatic life H402

Precautionary statements			
Prevention	Response	Storage	Disposal
P273 Avoid release to the environment. <i>- if this is not the intended use.</i>			P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified).

HAZARDOUS TO THE AQUATIC ENVIRONMENT - CHRONIC HAZARD (CHAPTER 4.1)

Symbol
Environment



Hazard category	Signal word	Hazard statement
1	Warning	Very toxic to aquatic life with long lasting effects H410
2	<i>No signal word</i>	Toxic to aquatic life with long lasting effects H411

Precautionary statements			
Prevention	Response	Storage	Disposal
P273 Avoid release to the environment. - <i>if this is not the intended use.</i>	P391 Collect spillage.		P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified).

HAZARDOUS TO THE AQUATIC ENVIRONMENT - CHRONIC HAZARD (CHAPTER 4.1)

Symbol <i>No symbol</i>

Hazard category	Signal word	Hazard statement
3	<i>No signal word</i>	Harmful to aquatic life with long lasting effects H412
4	<i>No signal word</i>	May cause long lasting harmful effects to aquatic life H413

Precautionary statements			
Prevention	Response	Storage	Disposal
P273 Avoid release to the environment. - <i>if this is not the intended use.</i>			P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified).

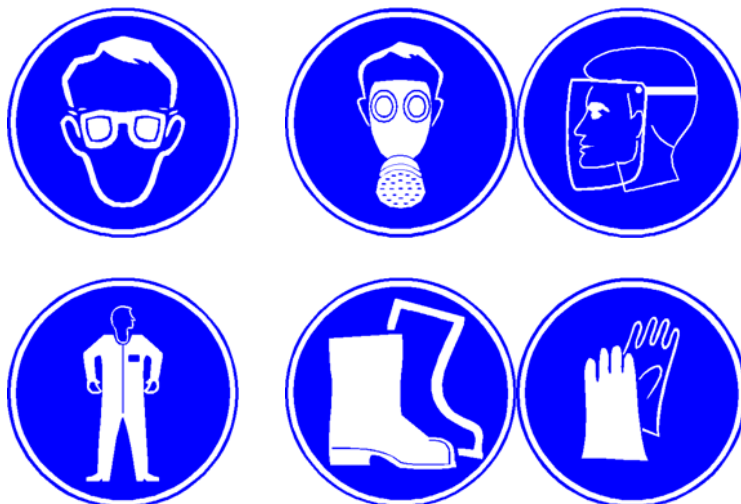
Annex 3

SECTION 4

EXAMPLES OF PRECAUTIONARY PICTOGRAMS

A3.4.1 Precautionary pictograms

From European Union (Council directive 92/58/EEC of 24 June 1992)



From South African Bureau of Standards (SABS 0265:1999)



Annex 4

A4.3.5.1 Replace (in the first sentence) “type of extinguishers or fire-fighting agents” and (in the second sentence) “extinguishers”, respectively, with “extinguishing media”.

A4.3.5.3 In the title, replace “equipment and precautions” with “actions”.

A4.3.5.3.1 In the first sentence, replace “precaution” with “protective actions”.

A4.3.5.3.2 Delete this paragraph.

A4.3.6.1 Insert a new sub-paragraph number and heading under current A4.3.6.1, as follows:

“A4.3.6.1.1 For non-emergency personnel”

(Current text under A4.3.6.1 “Provide advice related to... or to consult an expert”, remains unchanged)

Add the following new sub-paragraph:

“A4.3.6.1.2 For emergency responders

Provide advice related to suitable fabric for personal protective clothing (e.g.: appropriate: Butylene; not appropriate: PVC).”.

A4.3.14 Insert a new sub-section A4.3.14.7 to read as follows:

“A4.3.14.7 *Transport in bulk according to Annex II of MARPOL 73/78⁹ and the IBC Code¹⁰*”

This sub-section only applies when cargoes are intended to be carried in bulk according to the following IMO instruments: Annex II of MARPOL 73/78 and the IBC Code.

Provide the product name (if name is different to that given in A4.3.1.1) as required by the shipment document and in accordance with the name used in the lists of product names given in Chapters 17 or 18 of the IBC Code or the latest edition of the IMO’s MEPC.2/Circular. Indicate ship type required and pollution category.”.

Consequential amendment: Current footnotes “9”, “10” and “11” become “11”, “12” and “13” respectively.

⁹ **MARPOL 73/78** means the *International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as amended.*

¹⁰ **IBC Code** means the *International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).*