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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.

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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) <u>Hazard classes are building blocks</u>:

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) <u>Within a hazard class, each hazard category can be seen as a building block</u>:

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).

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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 subparagraph "(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 subparagraph "(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

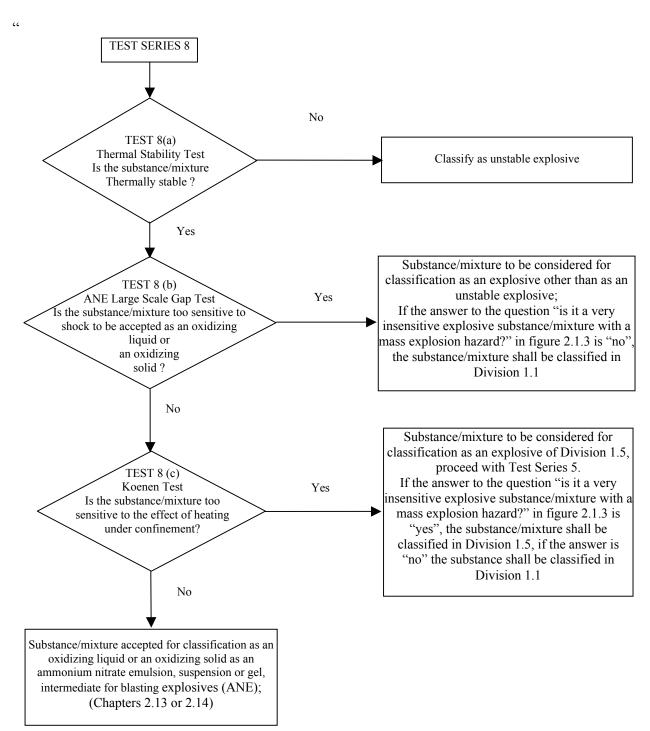
2.1.2.2 In Note 2 to table 2.1.1, insert ", see 1.3.2.4.5.2" at the end of the paragraph after "(e.g. transport)".

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) <u>Symbol</u>: exploding bomb;
- (b) <u>Signal word</u>: "Danger"; and
- (c) <u>Hazard statement</u>: "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 " ≥ 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 ≥ 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";

<u>Consequential amendments to tables A2.20 and A2.21</u>: 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

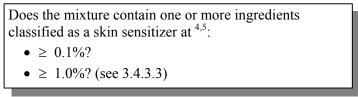
as sensitizer. Others may choose to classify and label the mixture as a sensitizer in accordance with notes 1, 3 and 5 to Table 3.4.1."

- 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:



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 2u-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.".

Cohen, S.M., J. Klaunig, M.E. Meek, R.N. Hill, T. Pastoor, L. Lehman-McKeeman, J. Bucher, D.G. Longfellow, J. Seed, V. Dellarco, P. Fenner-Crisp, and D. Patton. 2004.

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Meek, M.E., J.R. Bucher, S.M. Cohen, V. Dellarco, R.N. Hill, L. Lehman-McKeeman, D.G. Longfellow, T. Pastoor, J. Seed, D.E. Patton. 2003. A framework for human relevance analysis of information on carcinogenic modes of action. Crit. Rev.Toxicol., 33(6), 591-653.

Sonich-Mullin, C., R. Fielder, J. Wiltse, K. Baetcke, J. Dempsey, P. Fenner-Crisp, D. Grant, M. Hartley, A. Knapp, D. Kroese, I. Mangelsdorf, E. Meek, J.M. Rice, and M. Younes. 2001. *The Conceptual Framework for Evaluating a Mode of Action for Chemical Carcinogenesis.* Reg. Tox. Pharm. 34, 146-152.

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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.

<u>Note by the secretariat</u>: 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 " ≥ 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 " \leq 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.

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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.

| Code | Hazard statements for physical hazards | Hazard class (GHS Chapter) | Hazard category |
|------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------|
| (1) | (2) | (3) | (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) | Туре А |
| H241 | Heating may cause a fire or explosion | Self-reactive substances and mixtures (Chapter 2.8); and Organic peroxides (Chapter 2.15) | Туре В |
| 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 |
| | | | 1 |
| 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 |

Table A3.1.1 Hazard statement codes for physical hazards

| Code | Hazard statements for physical hazards | Hazard class (GHS Chapter) | Hazard category |
|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------|
| (1) | (2) | (3) | (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 | Hazard statements for health hazards | Hazard class (GHS Chapter) | Hazard category |
|------|-------------------------------------------------------------------------|------------------------------------------|--------------------|
| (1) | (2) | (3) | (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 |

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| Code | Hazard statements for health hazards Hazard class (GHS Chapter) | | Hazard category |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------|
| (1) | (2) | (3) | (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 damageSkin 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 | | |
| H336 | May cause drowsiness or dizziness | Specific target organ toxicity – single exposure; Narcosis (Chapter 3.8) | 3 |
| H340 | May cause genetic defects (state route | Germ cell mutagenicity | 1A, 1B |
| | of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | (Chapter 3.5) | |
| H341 | Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | Germ cell mutagenicity (Chapter 3.5) | 2 |

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| Code | Hazard statements for health hazards | Hazard class (GHS Chapter) | Hazard category |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------|
| (1) | (2) | (3) | (4) |
| | | | |
| H350 | May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | Carcinogenicity (Chapter 3.6) | 1A, 1B |
| H351 | Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | Carcinogenicity (Chapter 3.6) | 2 |
| H360 | May domage fortility on the unhorn | Down dootion to it. | 1A, 1B |
| 11300 | May damage fertility or the unborn child (state specific effect if known (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | Reproductive toxicity (Chapter 3.7) | IA, ID |
| H361 | Suspected of damaging fertility or | Reproductive toxicity | 2 |
| 112.01 | the unborn child (state specific effect if known)(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | (Chapter 3.7) | _ |
| H362 | May cause harm to breast-fed | Reproductive toxicity – effects on | Additional |
| 11502 | children | or via lactation (Chapter 3.7) | category |
| | | () | 6 7 |
| H370 | Causes damage to organs (or state all organs affected, if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | Specific target organ toxicity – single exposure (Chapter 3.8) | 1 |
| H371 | May cause damage to organs (or state all organs affected, if known)(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) | Specific target organ toxicity – single exposure (Chapter 3.8) | 2 |
| H372 | Causes damage 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) | Specific target organ toxicity – repeated exposure (Chapter 3.9) | 1 |
| H373 | May cause damage 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) | Specific target organ toxicity – repeated exposure (Chapter 3.9) | 2 |

| Code | Hazard statements for environmental hazards | Hazard class (GHS Chapter) | Hazard category |
|------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------|
| (1) | (2) | (3) | (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 | | |
| 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 effectsHazardous to the aquatic environment – chronic toxicity (Chapter 4.1) | | 3 |
| H413 | May cause long lasting harmful effects to aquatic life | e long lasting harmful effects Hazardous to the aquatic | |

Table A3.1.3 Hazard statement codes for environmental hazards

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 | General precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|-------------------------------------|----------------|-----------------|--------------------|
| (1) | (2) | (3) | (4) | (5) |
| | If medical advice is needed, have | as appropriate | | Consumer products |
| | 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 | y statements |
|---------------------|-----------------|------------|---------------|--------------|
|---------------------|-----------------|------------|---------------|--------------|

| Code | Prevention precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|-----------------------------------------|-------------------------------------------|-----------------------|--------------------|
| (1) | (2) | (3) | (4) | (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 | Additional | |
| | | lactation (Chapter 3.7) | category | |
| P202 | Do not handle until all safety | Explosives (Chapter 2.1) | Unstable | |
| | precautions have been read and | | explosive | |
| | understood. | 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 | Prevention precautionary statements | Hazard class | Hazard category | Conditions for use |
|-------|-----------------------------------------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (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 |
| | | Flammable gases (Chapter 2.2) | 1, 2 | source(s). |
| | | 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 | Types | |
| | | (Chapter 2.8) | 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. |
| | | Oxidizing liquids (Chapter 2.13) | 1, 2, 3 | - specify to keep away from heat. |
| | | Oxidizing solids (Chapter 2.14) | 1, 2, 3 | |
| P211 | Do not spray on an open flame or other ignition source. | Flammable aerosols (Chapter 2.3) | 1, 2 | |
| P220 | Keep/Store away from | Oxidizing gases (Chapter 2.4) | 1 | Manufacturer/supplier or the |
| 1 220 | clothing//combustible materials. | Self-reactive substances and mixtures | Types | competent authority to specify other |
| | | (Chapter 2.8) | A, B, C, D, E, F | incompatible materials. |
| | | Oxidizing liquids (Chapter 2.13) | 2, 3 | |
| | | Oxidizing solids (Chapter 2.14) | 2, 3 | 1 |
| | | Organic peroxides (Chapter 2.15) | Types A, B, C, D, E, F | |
| | | Oxidizing liquids (Chapter 2.13) | 1 | - specify to keep away from clothing |
| | | Oxidizing solids (Chapter 2.14) | 1 | as well as other incompatible materials. |
| | | | | |

| Code | Prevention precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (5) |
| P221 | Take any precaution to avoid mixing with combustibles/ | Oxidizing liquids (Chapter 2.13) Oxidizing solids (Chapter 2.14) | 1, 2, 3 1, 2, 3 | Manufacturer/supplier or the competent authority to specify other incompatible materials. |
| P222 | Do not allow contact with air. | Pyrophoric liquids (Chapter 2.9) 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</i> <i>hazard, except as needed for</i> <i>manufacturing or operating processes</i> (<i>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 | |
| | | Acute toxicity – inhalation (Chapter 3.1) Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8) | 1, 2, 3 3 | - if product is volatile so as to generate hazardous atmosphere. |
| | | Specific target organ toxicity – single exposure; narcosis (Chapter 3.8) | 3 | |

| Code | Prevention precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (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 | - <i>if the explosive is electrostatically sensitive.</i> |
| | | 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. - <i>if dust clouds can occur</i> . |
| P242 | Use only non-sparking tools. | Flammable liquids (Chapter 2.6) | 1, 2, 3 | |

| Code | Prevention precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (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) Specific target organ toxicity – single exposure (Chapter 3.8) | 1, 2 1, 2 | Manufacturer/supplier or the competent authority to specify applicable conditions. |
| | | Specific target organ toxicity – prolonged or repeated exposure (Chapter 3.9) | 1, 2 | |
| | | Skin corrosion (Chapter 3.2) Reproductive toxicity – effects on or via lactation (Chapter 3.7) | 1A, 1B, 1C Additional category | - Specify do not breathe dusts or mists - if inhalable particles of dusts or mists may occur during use. |
| P261 | Avoid breathing | Acute toxicity – inhalation (Chapter 3.1) | 3, 4 | Manufacturer/supplier or the competent |
| | dust/fume/gas/mist/vapours/spray. | Respiratory sensitization (Chapter 3.4) | 1 | authority to specify applicable |
| | | Skin sensitization (Chapter 3.4) | 1 | conditions. |
| | | 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 | Prevention precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|---------------------------------------|----------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------|
| (1) | (2) | (3) | (4) | (5) |
| P264 | Wash thoroughly after handling. | Acute toxicity – oral (Chapter 3.1) | 1, 2, 3, 4 | Manufacturer/supplier or the |
| | | Acute toxicity – dermal (Chapter 3.1) | 1, 2 | competent authority to specify parts of |
| | | Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | the body to be washed after handling. |
| | | Skin irritation (Chapter 3.2) | 2 | |
| | | Eye irritation (Chapter 3.3) | 2A, 2B | |
| | | Reproductive toxicity – effects on or via | Additional | |
| | | lactation (Chapter 3.7) | 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 | Acute toxicity – oral (Chapter 3.1) | 1, 2, 3, 4 | |
| | this product. | Acute toxicity – dermal (Chapter 3.1) | 1, 2 | |
| | | Reproductive toxicity – effects on or via | Additional | |
| | | lactation (Chapter 3.7) | 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- | Acute toxicity – inhalation (Chapter 3.1) | 1, 2, 3, 4 | |
| | ventilated area. | 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 | Skin sensitization (Chapter 3.4) | 1 | |
| | not be allowed out of the workplace. | · • • · | | |

| Code | Prevention precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|------------------------------------------|-----------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (5) |
| P273 | 73 Avoid release to the environment. | Hazardous to the aquatic environment – acute toxicity (Chapter 4.1) | 1, 2, 3 | - if this is not the intended use. |
| | | Hazardous to the aquatic environment – chronic toxicity (Chapter 4.1) | 1, 2, 3, 4 | |
| P280 | Wear protective gloves/protective | Explosives (Chapter 2.1) | Divisions 1.1, | Manufacturer/supplier or the competent |
| 1200 | clothing/eye protection/face protection. | | 1.2, 1.3, 1.4, 1.5 | authority to specify type of equipment. - Specify face protection. |
| | | Flammable liquids (Chapter 2.6) | 1, 2, 3, 4 | Manufacturer/supplier or the competent |
| | | Flammable solids (Chapter 2.7) | 1, 2 | authority to specify type of equipment. |
| | | Self-reactive substances and mixtures (Chapter | Types A, B, C, D, | - Specify protective gloves and eye/face |
| | | 2.8) | E, F | protection. |
| | | Pyrophoric liquids (Chapter 2.9) | 1 | |
| | | Pyrophoric solids (Chapter 2.10) | 1 | |
| | | Self-heating substances and mixtures | 1, 2 | |
| | | (Chapter 2.11) | | |
| | | Substances and mixtures which, in contact | 1, 2, 3 | |
| | | with water, emit flammable gases | | |
| | | (Chapter 2.12) | | - |
| | | 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. - Specify protective gloves/clothing. |
| | | Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | Manufacturer/supplier or the competent authority to specify type of equipment. - Specify protective gloves/clothing and eye/face protection. |

| Code | Prevention precautionary statements | Hazard class | Hazard category | Conditions for use |
|-------------------|----------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (5) |
| P280 | Wear protective gloves/protective | Skin irritation (Chapter 3.2) | 2 | Manufacturer/supplier or the competent |
| | clothing/eye protection/face protection. (cont'd) | Skin sensitization (Chapter 3.4) | 1 | authority to specify type of equipment. - Specify protective gloves. |
| | | Severe eye damage (Chapter 3.3) | 1 | Manufacturer/supplier or the competent |
| | | Eye irritation (Chapter 3.3) | 2A | authority to specify type of equipment. - Specify eye/face protection. |
| P281 | Use personal protective equipment as | Explosives (Chapter 2.1) | Unstable | |
| | required. | | 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/flame resistant/retardant | Oxidizing liquids (Chapter 2.13) | 1 | |
| | clothing. | 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 + | Handle under inert gas. Protect from moisture. | Substances and mixtures which, in contact with water, emit flammable gases | 1, 2, 3 | |
| P232 | | (Chapter 2.12) | | |
| P235 + P410 | Keep cool. Protect from sunlight. | Self-heating substances and mixtures (Chapter 2.11) | 1, 2 | |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|------------------------------------------|--------------------------------------------------|-----------------|--------------------|
| (1) | (2) | (3) | (4) | (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 | 3 | |
| | | exposure; respiratory tract irritation | | |
| | | (Chapter 3.8) | | |
| | | Specific target organ toxicity – single | 3 | |
| | | exposure; narcosis (Chapter 3.8) | | |
| 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 | 1 | |
| | | (Chapter 3.8) | | |
| 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 | Additional | |
| | | lactation (Chapter 3.7) | category | |

 Table A3.2.3
 Codification of response precautionary statements

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|--------------------------------------|-----------------------------------------------------------------------------|-----------------|--------------------|
| (1) | (2) | (3) | (4) | (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 | Acute toxicity – oral (Chapter 3.1) | 1, 2, 3 | |
| | or doctor/physician. | 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 | Acute toxicity – inhalation (Chapter 3.1) | 3 | |
| | doctor/physician. | Respiratory sensitization (Chapter 3.4) | 1 | |
| | | Specific target organ toxicity – single exposure (Chapter 3.8) | 1, 2 | |
| P312 | Call a POISON CENTER or | Acute toxicity – oral (Chapter 3.1) | 4 | |
| | doctor/physician if you feel unwell. | 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 | 3 | |
| | | exposure; respiratory tract irritation (Chapter 3.8) | | |
| | | 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 | Additional | |
| | | lactation (Chapter 3.7) | category | |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|-----------------------------------------------------|-------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (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. - <i>if immediate administration of antidote is required</i> . |
| P321 | Specific treatment (see on this label). | Acute toxicity – oral (Chapter 3.1) | 1, 2, 3 | Reference to supplemental first aid instruction. <i>if immediate administration of antidote is required.</i> |
| | | Acute toxicity – inhalation (Chapter 3.1) | 3 | Reference to supplemental first aid instruction. - <i>if immediate specific measures are required</i> . |
| | | Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | Reference to supplemental first aid |
| | | Skin irritation (Chapter 3.2) | 2 | instruction. |
| | | Skin sensitization (Chapter 3.4) | 1 | - manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate. |
| | | Specific target organ toxicity – single exposure (Chapter 3.8) | 1 | Reference to supplemental first aid instruction. - <i>if immediate measures are required</i> . |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|----------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (5) |
| P322 | Specific measures (see on this label). | Acute toxicity – dermal (Chapter 3.1) | 1, 2 | Reference to supplemental first aid instruction. - <i>if immediate measures such as specific cleansing agent is advised.</i> |
| | | Acute toxicity – dermal (Chapter 3.1) | 3, 4 | Reference to supplemental first aid instruction. <i>if measures such as specific cleansing agent is advised.</i> |
| P330 | Rinse mouth. | A outo toxicity oral (Chapter 2.1) | 1224 | |
| P330 | Kinse mouth. | Acute toxicity – oral (Chapter 3.1) Skin corrosion (Chapter 3.2) | 1, 2, 3, 4 1A, 1B, 1C | - |
| P331 | Do NOT induce vomiting. | Skin corrosion (Chapter 3.2) Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | |
| 1331 | Do NOT mauce vomiting. | 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 3.2) | 1 | |
| P334 | Immerse in cool water/wrap in wet | Pyrophoric liquids (Chapter 2.9) | 1 | |
| 1551 | bandages. | Pyrophoric solids (Chapter 2.10) | 1 | |
| | 8 | 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 | Gases under pressure (Chapter 2.5) | Refrigerated | |
| | water. Do not rub affected area. | | liquefied gas | |
| P337 | If eye irritation persists: | Eye irritation (Chapter 3.3) | 2A, 2B | |
| P338 | Remove contact lenses, if present and | Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | |
| | easy to do. Continue rinsing. | Severe eye damage (Chapter 3.3) | 1 |] |
| | | Eye irritation (Chapter 3.3) | 2A, 2B | |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|------------------------------------------|-------------------------------------------|-----------------|--------------------|
| (1) | (2) | (3) | (4) | (5) |
| P340 | Remove victim to fresh air and keep at | Acute toxicity – inhalation (Chapter 3.1) | 1, 2, 3, 4 | |
| | rest in a position comfortable for | Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | |
| | breathing. | Specific target organ toxicity – single | 3 | |
| | | exposure; respiratory tract irritation | | |
| | | (Chapter 3.8) | | |
| | | Specific target organ toxicity – single | 3 | |
| | | exposure; narcosis (Chapter 3.8) | | |
| P341 | If breathing is difficult, remove victim | Respiratory sensitization (Chapter 3.4) | 1 | |
| | to fresh air and keep at rest in a | | | |
| | position comfortable for breathing. | | | |
| P342 | If experiencing respiratory symptoms: | Respiratory sensitization (Chapter 3.4) | 1 | |
| | | | | |
| P350 | Gently wash with plenty of soap and | Acute toxicity – dermal (Chapter 3.1) | 1, 2 | |
| | water. | | | |
| P351 | Rinse cautiously with water for several | Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | |
| | minutes. | 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 | Oxidizing liquids (Chapter 2.13) | 1 | |
| | clothing and skin with plenty of water | Oxidizing solids (Chapter 2.14) | 1 | |
| | before removing clothes. | | | |
| P361 | Remove/Take off immediately all | Flammable liquids (Chapter 2.6) | 1, 2, 3 | |
| | contaminated clothing. | Acute toxicity – dermal (Chapter 3.1) | 1, 2, 3 | |
| | | Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | |
| P362 | Take off contaminated clothing and | Skin irritation (Chapter 3.2) | 2 | |
| | wash before reuse. | | | |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|------------------------------------------|-------------------------------------------|--------------------|-------------------------------------|
| (1) | (2) | (3) | (4) | (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, | |
| 1570 | In case of fife. | Explosives (Chapter 2.1) | 1.2, 1.3, 1.4, 1.5 | |
| | | Oxidizing gases (Chapter 2.4) | 1.2, 1.5, 1.4, 1.5 | |
| | | Flammable liquids (Chapter 2.6) | 1, 2, 3, 4 | |
| | | Flammable solids (Chapter 2.7) | 1, 2, 3, 1 | |
| | | Self-reactive substances and mixtures | Types A, B, C, D, | |
| | | (Chapter 2.8) | E, F | |
| | | Pyrophoric liquids (Chapter 2.9) | 1 | |
| | | Pyrophoric solids (Chapter 2.10) | 1 | |
| | | Substances and mixtures which, in contact | 1, 2, 3 | |
| | | with water, emit flammable gases | | |
| | | (Chapter 2.12) | | |
| | | Oxidizing liquids (Chapter 2.13) | 1, 2, 3 | |
| | | Oxidizing solids (Chapter 2.14) | 1, 2, 3 | |
| P371 | In case of major fire and large | Oxidizing liquids (Chapter 2.13) | 1 | |
| | quantities: | Oxidizing solids (Chapter 2.14) | 1 | |
| P372 | Explosion risk in case of fire. | Explosives (Chapter 2.1) | Unstable | - except if explosives are 1.4S |
| | | | explosives and | AMMUNITION AND COMPONENTS |
| | | | Divisions 1.1, | THEREOF. |
| | | | 1.2, 1.3, 1.4, 1.5 | THEREOF. |
| P373 | DO NOT fight fire when fire reaches | Explosives (Chapter 2.1) | Unstable | |
| | explosives. | | explosives and | |
| | | | Divisions 1.1, | |
| | | | 1.2, 1.3, 1.4, 1.5 | |
| | Fight fire with normal precautions | Explosives (Chapter 2.1) | Division 1.4 | - if explosives are 1.4S AMMUNITION |
| | from a reasonable distance. | | | AND COMPONENTS THEREOF. |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------|
| (1) | (2) | (3) | (4) | (5) |
| P375 | Fight fire remotely due to the risk of explosion. | Self-reactive substances and mixtures (Chapter 2.8) | Types A, B | |
| | F | 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 |
| | | Flammable solids (Chapter 2.7) | 1, 2 | competent authority to specify |
| | | Self-reactive substances and mixtures (Chapter | Types A, B, C, D, | appropriate media |
| | | 2.8) | E, F | - if water increases risk. |
| | | 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 | Flammable gases (Chapter 2.2) | 1, 2 | |
| | do so. | | | |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|-----------|-------------------------------------------------------------------------|---------------------------------------------|-----------------|--------------------|
| (1) | (2) | (3) | (4) | (5) |
| P390 | Absorb spillage to prevent material | Substances and mixtures Corrosive to metals | 1 | |
| | damage. | (Chapter 2.16) | | |
| P391 | Collect spillage. | Hazardous to the aquatic environment – | 1 | |
| | | acute toxicity (Chapter 4.1) | | |
| | | Hazardous to the aquatic environment – | 1, 2 | |
| | | chronic toxicity (Chapter 4.1) | | |
| | | | | |
| P301 | IF SWALLOWED: Immediately call a | Acute toxicity – oral (Chapter 3.1) | 1, 2, 3 | |
| + | POISON CENTER or | Aspiration hazard (Chapter 3.10) | 1, 2 | |
| P310 | doctor/physician. | | | |
| P301 | IF SWALLOWED: Call a POISON | Acute toxicity – oral (Chapter 3.1) | 4 | |
| + | CENTER or doctor/physician if you | | | |
| P312 | feel unwell. | | | |
| P301 | IF SWALLOWED: Rinse mouth. Do | Skin Corrosion (Chapter 3.2) | 1A, 1B, 1C | |
| + | NOT induce vomiting. | | | |
| P330 | | | | |
| + | | | | |
| P331 | | | | |
| P302 | IF ON SKIN: Immerse in cool | Pyrophoric liquids (Chapter 2.9) | 1 | |
| + | water/wrap in wet bandages. | | | |
| P334 | | | 1.2 | |
| P302 | IF ON SKIN: Gently wash with plenty | Acute toxicity – dermal (Chapter 3.1) | 1, 2 | |
| + P350 | of soap and water. | | | |
| | IF ON SVIN, Weak with alarta of | A suite tourisity demused (Chamton 2.1) | 2.4 | |
| P302 | IF ON SKIN: Wash with plenty of | Acute toxicity – dermal (Chapter 3.1) | 3, 4 | |
| + P352 | soap and water. | Skin irritation (Chapter 3.2) | 2 | |
| | | Skin sensitization (Chapter 3.4) | | |
| P303 | IF ON SKIN (or hair): Take off | Flammable liquids (Chapter 2.6) | 1, 2, 3 | |
| + | immediately all contaminated clothing. Rinse skin with water/shower. | Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | |
| P361 | kinse skin with water/snower. | | | |
| + | | | | |
| P353 | | | | |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|--------------|----------------------------------------|----------------------------------------------------|-----------------|--------------------|
| (1) | (2) | (3) | (4) | (5) |
| P304 | IF INHALED: Call a POISON | Acute toxicity – inhalation (Chapter 3.1) | 5 | |
| + | CENTER or doctor/physician if you | | | |
| P312 | feel unwell. | | | |
| P304 | IF INHALED: Remove victim to fresh | Acute toxicity – inhalation (Chapter 3.1) | 1, 2, 3, 4 | |
| + | air and keep at rest in a position | Skin Corrosion (Chapter 3.2) | 1A, 1B, 1C | |
| P340 | comfortable for breathing. | Specific target organ toxicity – single | 3 | |
| | | exposure; respiratory tract irritation | | |
| | | (Chapter 3.8) | | |
| | | Specific target organ toxicity – single | 3 | |
| | | exposure; narcosis (Chapter 3.8) | | |
| | IF INHALED: If breathing is difficult, | Respiratory sensitization (Chapter 3.4) | 1 | |
| + | remove victim to fresh air and keep at | | | |
| P341 | rest in a position comfortable for | | | |
| | breathing. | | | |
| | IF IN EYES: Rinse cautiously with | Skin corrosion (Chapter 3.2) | 1A, 1B, 1C | |
| + | water for several minutes. Remove | Severe eye damage (Chapter 3.3) | 1 | |
| P351 | contact lenses, if present and easy to | Eye irritation (Chapter 3.3) | 2A, 2B | |
| + | do. Continue rinsing. | | | |
| P338 | | | 1 | |
| P306 | IF ON CLOTHING: Rinse | Oxidizing liquids (Chapter 2.13) | 1 | |
| + | immediately contaminated clothing and | Oxidizing solids (Chapter 2.14) | l | |
| P360 | skin with plenty of water before | | | |
| D207 | removing clothes. | Sussifie tonget engen tonicity single | 1 | |
| | IF exposed: Call a POISON CENTER | Specific target organ toxicity $-$ single exposure | 1 | |
| + P311 | or doctor/physician. | (Chapter 3.8) | | |
| P311 P308 | IF exposed or concerned: Get medical | Corm coll mutagonicity (Chapter 2.5) | 1A, 1B, 2 | |
| + | advice/attention. | Germ cell mutagenicity (Chapter 3.5) | | |
| т Р313 | | Carcinogenicity (Chapter 3.6) | 1A, 1B, 2 | |
| 1313 | | Reproductive toxicity (Chapter 3.7) | 1A, 1B, 2 | |
| | | Reproductive toxicity – effects on or via | Additional | |
| | | lactation (Chapter 3.7) | category | |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|-------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (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 | Brush off loose particles from skin. | Pyrophoric solids (Chapter 2.10) | 1 | |
| + P334 | Immerse in cool water/wrap in wet bandages. | 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 + | In case of fire: Use for extinction. | Flammable liquids (Chapter 2.6) Flammable solids (Chapter 2.7) | 1, 2, 3, 4 1, 2 | Manufacturer/supplier or the competent authority to specify |
| P378 | | Self-reactive substances and mixtures (Chapter 2.8) Pyrophoric liquids (Chapter 2.9) | Types A, B, C, D, E, F 1 | appropriate media. - <i>if water increases risk</i> . |
| | | Pyrophoric solids (Chapter 2.10) | 1 | |

| Code | Response precautionary statements | Hazard class | Hazard category | Conditions for use |
|-------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------|--------------------|
| (1) | (2) | (3) | (4) | (5) |
| P370 + P378 | In case of fire: Use for extinction (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 | |
| | 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 | |
| + P375 | | | | |
| | In case of major fire and large | Oxidizing liquids (Chapter 2.13) | 1 | |
| + | quantities: Evacuate area. Fight fire | Oxidizing solids (Chapter 2.14) | 1 | |
| P380 | remotely due to the risk of explosion. | | | |
| + | | | | |
| P375 | | | | |

| 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) | | 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 | Storage precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|-----------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------|
| (1) | (2) | (3) | (4) | (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 | - if product is volatile so as to generate |
| | | Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8) | 3 | hazardous atmosphere. |
| | | 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 | Storage precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (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 | |
| | | Organic peroxides (Chapter 2.15) | Types A, B, C, D, E, F | |
| 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 |
| | | Organic peroxides (Chapter 2.15) | Types A, B, C, D, E, F | temperature. |
| P412 | Do not expose to temperatures exceeding 50 °C/ 122 °F. | Flammable aerosols (Chapter 2.3) | 1, 2 | |

| Code | Storage precautionary statements | Hazard class | Hazard category | Conditions for use |
|-------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (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 |
| | | Pyrophoric solids (Chapter 2.10) | 1 | competent authority to specify appropriate liquid or inert gas. |
| 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 | Store in a well-ventilated place. Keep | Acute toxicity – inhalation (Chapter 3.1) | 1, 2, 3 | - if product is volatile so as to generate |
| + P233 | container tightly closed. | Specific target organ toxicity – single exposure; respiratory tract irritation (Chapter 3.8) | 3 | hazardous atmosphere. |
| | | Specific target organ toxicity – single exposure; narcosis (Chapter 3.8) | 3 | |
| P403 | Store in a well-ventilated place. Keep | Flammable liquids (Chapter 2.6) | 1, 2, 3, 4 | |
| + P235 | cool. | Self-reactive substances and mixtures (Chapter 2.8) | Types A, B, C, D, E, F | |
| P410 | Protect from sunlight. Store in a well- | Gases under pressure (Chapter 2.5) | Compressed gas | |
| + P403 | ventilated place. | | Liquefied gas | |
| r403 | | | Dissolved gas | |

| Code | Storage precautionary statements | Hazard class | Hazard category | Conditions for use |
|-------------------|----------------------------------------------------------------------------------|----------------------------------|-----------------|--------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (5) |
| | 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) | E F | Manufacturer/supplier or the competent authority to specify temperature. |

| | | | 1 | , |
|---------|-----------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Code | Disposal precautionary statements | Hazard class | Hazard category | Conditions for use |
| (1) | (2) | (3) | (4) | (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 | Disposal precautionary statements | Hazard class | Hazard category | Conditions for use |
|------|--------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------|--------------------|
| (1) | (2) | (3) | (4) | (5) |
| P501 | Dispose of contents/container to (cont'd) | 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.

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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 | | none of the above |

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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.

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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)

| | age 5 |
|---------------------------------|-------|
| Symbol Exploding bomb | 2 |
| - Harris | |

| Unstable ExplosiveDangerUnstable Explosive H200 | Hazard category | Signal word | Hazard statement |
|-------------------------------------------------|--------------------|-------------|-------------------------|
| | Unstable Explosive | Danger | Unstable Explosive H200 |

| Precautionary statements | | | |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Prevention | Response | Storage | Disposal |
| Obtain special instructions before use. P202 Do not handle until all safety precautions | P372 Explosion risk in case of fire. P373 DO NOT fight fire when fire reaches explosives. | in accordance with local/regional/ national/international regulations (to be | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |
| | P380 Evacuate area. | | |

EXPLOSIVES (CHAPTER 2.1)

| | | | Symbol Exploding bomb |
|-----------------|-------------|--------------------------------------------------|--------------------------|
| Hazard category | Signal word | Hazard statement | • |
| Division 1.1 | Danger | Explosive; mass explosion hazard H201 | ill - |
| 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 | |
| P210 | P370 + P380 | P401 | P501 | |
| Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier or the competent | P372 | Store in accordance with local/regional/ national/international regulations (to be | Dispose of contents/container to in accordance with local/regional/ national/international regulations (to | |
| authority to specify applicable ignition source(s). | Explosion risk in case of fire. | specified). | be specified). | |
| P230 Keep wetted with Manufacturer/supplier or the competent authority to specify appropriate material. <i>if drying out increases explosion hazard,</i> <i>except as needed for manufacturing or</i> <i>operating processes (e.g. nitrocellulose).</i> P240 Ground/bond container and receiving equipment. <i>if the explosive is electrostatically sensitive.</i> | P373 DO NOT fight fire when fire reaches explosives. | | | |
| P250 Do not subject to grinding/shock//friction. Manufacturer/supplier or the competent authority to specify applicable rough handling. P280 Wear face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | | | | |

EXPLOSIVES (CHAPTER 2.1)

Hazard statement

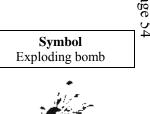
Fire or projection hazard H204

Signal word

Warning

Hazard category

Division 1.4



| | Precautionary st | atements | |
|-----------------------------------------------------------|----------------------------------------------------|-------------------------------------------|----------------------------------------|
| Prevention | Response | Storage | Disposal |
| P210 | P370 + P380 | P401 | P501 |
| Keep away from heat/sparks/open flames/hot | In case of fire: Evacuate area. | Store | Dispose of contents/container to |
| surfaces. – No smoking. | | in accordance with local/regional/ | in accordance with local/regional/ |
| Manufacturer/supplier or the competent | P372 | national/international regulations (to be | national/international regulations (to |
| authority to specify applicable ignition | Explosion risk in case of fire. | specified). | be specified). |
| source(s). | - except if <i>explosives are 1.4S</i> | | |
| P240 | AMMUNITION AND COMPONENTS | | |
| Ground/bond container and receiving | THEREOF. | | |
| equipment. | D272 | | |
| - <i>if the explosive is electrostatically sensitive.</i> | P373 DO NOT fight fire when fire reaches | | |
| P250 | explosives. | | |
| Do not subject to grinding/shock//friction. | capiosives. | | |
| | P374 | | |
| authority to specify applicable rough handling. | Fight fire with normal precautions | | |
| P280 | from a reasonable distance. | | |
| Wear face protection. | - if explosives are 1.4S AMMUNITION | | |
| Manufacturer/supplier or the competent | AND COMPONENTS THEREOF. | | |
| authority to specify type of equipment. | | | |

EXPLOSIVES (CHAPTER 2.1)

Symbol No symbol

| Hazard category Signa | al word Hazard s | tatement | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Division 1.5 Dang | er May mass | s explode in fire H205 | |
| | Precautionary s | tatements | |
| 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). | P370 + P380 In case of fire: Evacuate area. P372 Explosion risk in case of fire. P373 | P401 Store in accordance with local/regional/ national/international regulations (to be specified). | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |
| P230 Keep wetted with Manufacturer/supplier or the competent authority to specify appropriate material. <i>if drying out increases explosion hazard,</i> <i>except as needed for manufacturing or</i> <i>operating processes (e.g. nitrocellulose).</i> | DO NOT fight fire when fire reaches explosives. | | |
| P240 Ground/bond container and receiving equipment. - if the explosive is electrostatically sensitive | | | |
| P250 Do not subject to grinding/shock//friction. Manufacturer/supplier or the competent authority to specify applicable rough handling. | | | |
| P280 Wear face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | | | |

FLAMMABLE GASES (CHAPTER 2.2)

| | | | Symbol Flame |
|------------------------------------------|----------------------------------------|-----------------------------------|-----------------|
| Hazard category Sig | nal word Hazard | statement | S . |
| 1 Da | ger Extreme | ely flammable gas H220 | |
| | Precautionary | statements | |
| Prevention | Response | Storage | Disposal |
| P210 | P377 | P403 | |
| Keep away from heat/sparks/open flames/h | | Store in a well-ventilated place. | |
| surfaces. – No smoking. | Do not extinguish, unless leak can b | e | |
| Manufacturer/supplier or the competent | stopped safely. | | |
| authority to specify applicable ignition | P381 | | |
| source(s). | Eliminate all ignition sources if safe | | |
| | to do so. | | |

FLAMMABLE GASES (CHAPTER 2.2)

Symbol No symbol

| Hazard category S | gnal word | Hazard statement | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| 2 W | arning | Flammable gas H221 | |
| | Precau | tionary statements | |
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/ surfaces. – No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). | P377 hot Leaking gas fire: Do not extinguish, unless lea stopped safely. P381 Eliminate all ignition source to do so. | | |

FLAMMABLE AEROSOLS (CHAPTER 2.3)

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

Precautionary statements

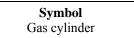
| Prevention | Response | Storage | Disposal |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------|----------|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

OXIDIZING GASES (CHAPTER 2.4)

| | | | Symbol Flame over circle |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------|-----------------------------|
| Hazard category Si | gnal word Hazard | statement | |
| 1 Da | nger May ca | use or intensify fire; oxidizer H270 | \bigcirc |
| | Precautionary | statements | |
| Prevention | Response | Storage | Disposal |
| P220 | P370 + P376 | P403 | |
| Keep/Store away from clothing// combustible materials. Manufacturer/supplier or the competent authority to specify other incompatible materials. | In case of fire: Stop leak if safe to d so. | o Store in a well-ventilated place. | |
| P244 Keep reduction valves free from grease an oil. | đ | | |

| | | GASES UNDER I (CHAPTEI | | page 60 |
|-----------------|-----------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------|--------------|
| | | | | Gas cylinder |
| Hazard category | Signal word | Hazard s | statement | 0/3 |
| Compressed gas | Warning Contains gas under pressure; may explode if heated H280 | | | 1280 |
| Liquefied gas | Warning | ng Contains gas under pressure; may explode if heated H280 | | |
| Dissolved gas | Warning | ing Contains gas under pressure; may explode if heated H280 | | |
| | | Precautionary st | tatements | |
| Prevention | | Response Storage | | |
| | | | P410 + P403 Protect from sunlight. Store in a well- ventilated place. | |

GASES UNDER PRESSURE (CHAPTER 2.5)



| Hazard category | Signal word | l word Hazard statement | | |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------|--|
| Refrigerated liquefied gas | Warning | Contains refrigerated gas; may cause cryc injury H281 | ogenic burns or | |
| | Preca | autionary statements | | |
| Prevention | Response | Storage | Disposal | |
| P282 Wear cold insulating gloves/face shield/ey protection. | P336 Thaw frosted parts with h water. Do not rub affecter P315 Get immediate medical advice/attention. | - | ce. | |

FLAMMABLE LIQUIDS (CHAPTER 2.6)

| Hazard category | Signal word | Hazard statement | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Danger | Extremely flammable liqui | id and vapour H224 | |
| 2 | Danger | Highly flammable liquid an | nd vapour H225 | |
| 3 | Warning | Flammable liquid and vapo | our H226 | $\mathbf{\Sigma}$ |
| | | Precautionary statements | | |
| Prevention | L | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open No smoking. Manufacturer/supplier or the competer applicable ignition source(s). P233 Keep container tightly closed. P240 Ground/bond container and received. <i>if electrostatically sensitive materia</i>. <i>if product is volatile so as to genere</i>. P241 Use explosion-proof electrical/venterequipment. Manufacturer/supplier or the correspective other equipment. P242 Use only non-sparking tools. P243 Take precautionary measures again P280 Wear protective gloves/eye protective of equipment. | tent authority to specify ving equipment. al is for reloading. ate hazardous tilating/lighting// npetent authority to inst static discharge. tion/face protection. | P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. 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> | P403 + P235 Store in a well-ventilated place. Keep cool. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

FLAMMABLE LIQUIDS (CHAPTER 2.6)

Symbol No symbol

| Hazard category | Signal word | Hazard statement | | |
|---------------------------------------|-----------------|----------------------------------------------|----------------------------|----------------------------------------|
| 4 | Warning | Combustible liquid H2 | 27 | |
| | | Precautionary statements | | |
| Prevention | | Response | Storage | Disposal |
| P210 | | P370 + P378 | P403 + P235 | P501 |
| Keep away from flames and hot sur | faces. – No | In case of fire: Use for extinction. | Store in a well-ventilated | Dispose of contents/container to |
| smoking. | | | place. Keep cool. | in accordance with local/regional/ |
| | | authority to specify appropriate media. | | national/international regulations (to |
| P280 | | if water increases risk. | | be specified). |
| Wear protective gloves/eye protection | on/face | | | |
| protection. | | | | |
| Manufacturer/supplier or the competer | nt authority to | | | |
| specify type of equipment. | | | | |

FLAMMABLE SOLIDS (CHAPTER 2.7)

Hazard statement

Flammable solid H228

Signal word

Danger

Hazard category

1

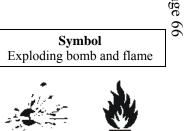
| | ge O |
|------------------------|------|
| Symbol Flame | + |
| 5 | |

| I Danger | Flammable solid H228 | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------|
| 2 Warning | Flammable solid H228 | | |
| | 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). | 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> | | |
| P240 Ground/bond container and receiving equipment. - if electrostatically sensitive material is for reloading. | | | |
| 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> | | | |
| P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | | | |

SELF-REACTIVE SUBSTANCES AND MIXTURES (CHAPTER 2.8)

| Hazard category | Signal word | Hazard statement | | Symbol Exploding bomb |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Type A | Danger | Heating may cause an | explosion H240 | |
| | | Precautionary statements | | |
| Preven | ntion | Response | Storage | Disposal |
| P210 Keep away from heat/spark surfaces. – No smoking. Manufacturer/supplier or the of specify applicable ignition soft P220 Keep/Store away from cloth materials. Manufacturer/supplier or t specify other incompatible materials. | competent authority to urce(s). ing//combustible he competent authority to | 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> P370 + P380 + P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. | P403 + P235 Store in a well-ventilated place. Keep cool. P411 Store at temperatures not exceeding°C/°F. Manufacturer/supplier or the competent authority to specify temperature. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |
| P234 Keep only in original contai P280 Wear protective gloves/eye p protection. Manufacturer/supplier or the o specify type of equipment. | protection/face | | P420 Store away from other materials. | |

SELF-REACTIVE SUBSTANCES AND MIXTURES (CHAPTER 2.8)



| Hazard category | Signal word | Hazard statement |
|-----------------|-------------|--------------------------------------------|
| Type B | Danger | Heating may cause a fire or explosion H241 |
| | | |

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

SELF-REACTIVE SUBSTANCES AND MIXTURES (CHAPTER 2.8)

| | | | | Symbol Flame |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard category Signal | word | Hazard statement | | |
| Type C Danger | r | Heating may cause a fi | re H242 | S . |
| Type D Danger | r | Heating may cause a fi | re H242 | |
| Type E Warnin | ng | Heating may cause a fi | re H242 | $\mathbf{\nabla}$ |
| Type F Warnin | ng | Heating may cause a fi | re H242 | |
| | | Precautionary statements | | |
| Prevention | | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier or the competent authority specify applicable ignition source(s). P220 Keep/Store away from clothing//combustible materials. Manufacturer/supplier or the competent authority specify other incompatible materials. P234 Keep only in original container. P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority specify type of equipment. | rity to | n case of fire: Use for extinction. Manufacturer/supplier or the competent uthority to specify appropriate media. <i>if water increases risk.</i> | P403 + P235 Store in a well-ventilated place. Keep cool. P411 Store at temperatures not exceeding°C/°F. Manufacturer/supplier or the competent authority to specify temperature. P420 Store away from other materials. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

PYROPHORIC LIQUIDS (CHAPTER 2.9)

| | ST/SG/, page 68 |
|--------|--------------------|
| Symbol | |
| Flame | \Box |
| * | .10/34/Add.3 |

| Hazard category | Signal word | Hazard statement | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------|--|
| 1 | Danger | Catches fire spontaneously if exposed to air H250 | | 8 | |
| | | Precautionary statements | | | |
| Prevention | | Response | Storage | Disposal | |
| P210 Keep away from heat/sparks/open surfaces. – No smoking. Manufacturer/supplier or the compe specify applicable ignition source(s) P222 Do not allow contact with air. P280 Wear protective gloves/eye protection. Manufacturer/supplier or the compe specify type of equipment. | tent authority to). tion/face | P302 + P334 IF ON SKIN: Immerse in cool water/wrap in wet bandages. 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> | P422 Store contents under Manufacturer/supplier or the competent authority to specify appropriate liquid or inert gas. | | |

PYROPHORIC SOLIDS (CHAPTER 2.10)

Symbol Flame

| Hazard category Sign | nal word | Hazard statement | <u>s</u> . |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 1 Danger | | Catches fire spontaneously if exposed to air H250 | |
| | Precautionar | y statements | |
| Prevention | Response | Storage | Disposal |
| P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier or the competent authority specify applicable ignition source(s). P222 Do not allow contact with air. P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority specify type of equipment. | P370 + P378 In case of fire: Use for Manufacturer/supplier of authority to specify appropri- <i>if water increases risk.</i> | ap in wet Manufacturer/supplier or the competent authority to specify appropriate liquid or inert gas.extinction.r the competent riate media. | |

SELF-HEATING SUBSTANCES AND MIXTURES (CHAPTER 2.11)

Symbol Flame

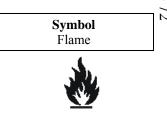
| Hazard category | Signal word | Hazard statement | |
|-----------------|-------------|-------------------------------------------------------|--|
| 1 | Danger | Self-heating; may catch fire H251 | |
| 2 | Warning | Self-heating in large quantities; may catch fire H252 | |

| | Precautionary statement | ts | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Prevention | Response | Storage | Disposal | | |
| P235 + P410 Keep cool. Protect from sunlight. | | P407 Maintain air gap between stacks/pallets. | | | |
| P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | or the competent authority to | | 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 | | S . |
| 1 | Danger | In contact with water releases flammable gases, which may ignite spontaneously H260 | | |
| 2 | Danger | In contact with water releases flami | nable gases H261 | |
| | | Precautionary statements | | |
| Prever | ntion | Response | Storage | Disposal |
| P223 Keep away from any poswater, because of violent flash fire. P231 + P232 Handle under inert gas. moisture. P280 Wear protective gloves/e protection. Manufacturer/supplier or t to specify type of equipment | ssible contact with t reaction and possible Protect from eye protection/face the competent authority | P335 + P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. 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> | P402 + P404 Store in a dry place. Store in a closed container. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

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



| Hazard category Sig | nal word Ha | azard statement | | 4 |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------|--|-------------------------------------------------------------------------------|
| 3 Warning | | contact with water releases flammable g | | |
| | Precauti | ionary statements | | |
| Prevention | Response | Storage | | Disposal |
| P231 + P232 | P370 + P378 | P402 + P404 | | P501 |
| Handle under inert gas. Protect from moisture. | In case of fire: Use for ex Manufacturer/supplier or t | the competent closed container. | | Dispose of contents/container to in accordance with local/regional/ |
| P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent author | authority to specify appropria - <i>if water increases risk.</i> rity | ite media. | | national/international regulations (to be specified). |
| to specify type of equipment. | | | | |

OXIDIZING LIQUIDS (CHAPTER 2.13)

| | | | | Flame over circle |
|-------------------------------------------------------------------------|--------------------------|---------------------------|----------------------------|----------------------------------------|
| Hazard category Sig | nal word | Hazard statement | | |
| 1 Dan | nger | May cause fire or explos | sion; strong oxidizer H271 | Ö |
| | | Precautionary statements | | |
| Prevention | | Response | Storage | Disposal |
| P210 | P306 + P360 | | | P501 |
| Keep away from heat. | | ING: Rinse immediately | | Dispose of contents/container to |
| P220 | | lothing and skin with | | in accordance with local/regional/ |
| Keep/Store away from clothing and other | plenty of water | before removing clothes. | | national/international regulations (to |
| combustible materials. | P371 + P380 + F | 0375 | | be specified). |
| P221 | In case of major | - / - | | |
| Take any precaution to avoid mixing with | • | cuate area. Fight fire | | |
| combustibles/ | remotely due to | the risk of explosion. | | |
| Manufacturer/supplier or the competent au | thority | - | | |
| to specify other incompatible materials. | P370 + P378 | | | |
| P280 | 0000 0 0 00 | Use for extinction. | | |
| Wear protective gloves/eye protection/face | | supplier or the competent | | |
| protection. | | bify appropriate media. | | |
| Manufacturer/supplier or the competent autho specify type of equipment. | brity to - if water incr | euses risk. | | |
| P283 | | | | |
| Wear fire/flame resistant/retardant clothin | g. | | | |

Symbol

OXIDIZING LIQUIDS (CHAPTER 2.13)

| Hazard category Sig | gnal word | Hazard statement | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 Da | anger | May intensify fire; ox | idizer H272 | |
| 3 Wa | arning | May intensify fire; ox | idizer H272 | \Box |
| | | Precautionary statements | | |
| Prevention | | Response | Storage | Disposal |
| P210 Keep away from heat. P220 Keep/Store away from clothing//combus materials. Manufacturer/supplier or the competent a to specify other incompatible materials. P221 Take any precaution to avoid mixing with combustibles/ Manufacturer/supplier or the competent a to specify other incompatible materials. | tible Manufactu authority to s - <i>if water i</i> | e: Use for extinction. arer/supplier or the competent pecify appropriate media. <i>increases risk</i> . | | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |
| P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent auth specify type of equipment. | | | | |

Symbol Flame over circle

OXIDIZING SOLIDS (CHAPTER 2.14)

| | | H | | Symbol Flame over circle |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard category 1 | Signal word Danger | Hazard statement May cause fire or exp | losion; strong oxidizer H271 | |
| | | Precautionary statements | | |
| Prevention | L | Response | Storage | Disposal |
| P210 Keep away from heat. P220 Keep/Store away from clothing combustible materials. P221 Take any precaution to avoid a combustibles/ Manufacturer/supplier or the to specify other incompatible materials. P280 Wear protective gloves/eye proprotection. Manufacturer/supplier or the conspecify type of equipment. P283 Wear fire/flame resistant/retains | g and other mixing with competent authority aterials. btection/face mpetent authority to contami plenty of P371 + F In case of quantiti remotely P370 + F In case of unantiti remotely i manual authority - <i>if wa</i> | CLOTHING: Rinse immediately inated clothing and skin with of water before removing clothes. P380 + P375 of major fire and large ies: Evacuate area. Fight fire y due to the risk of explosion. | | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

OXIDIZING SOLIDS (CHAPTER 2.14)

| Hazard category | Signal word | Hazard statement | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | Danger | May intensify fire; or | kidizer H272 | |
| 3 | Warning | May intensify fire; or | kidizer H272 | $\mathbf{\nabla}$ |
| | | Precautionary statements | 8 | |
| Prevention | | Response | Storage | Disposal |
| P210 Keep away from heat. P220 Keep/Store away from clothing//commaterials. Manufacturer/supplier or the competeto specify other incompatible materials. P221 Take any precaution to avoid mixing combustibles/ Manufacturer/supplier or the competeto specify other incompatible materials. P280 Wear protective gloves/eye protection protection. Manufacturer/supplier or the competent specify type of equipment. | nbustible ent authority with ent authority /face | 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). |

Symbol Flame over circle

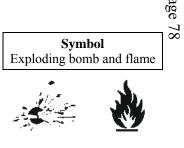
ORGANIC PEROXIDES (CHAPTER 2.15)

| | | | Symbol Exploding bomb |
|-----------------|-------------|-------------------------------------|--------------------------|
| Hazard category | Signal word | Hazard statement | * |
| Туре А | Danger | Heating may cause an explosion H240 | |

| Precautionary statements | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Prevention | Response | Storage | Disposal | | |
| P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). P220 Keep/Store away from clothing//combustible materials. Manufacturer/supplier or the competent authority to specify incompatible materials. P234 Keep only in original container. | | P411 + P235 Store at temperatures not exceeding °C/ °F. Keep cool. Manufacturer/supplier or the competent authority to specify temperature. P410 Protect from sunlight. P420 Store away from other materials. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). | | |
| P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | | | | | |

ORGANIC PEROXIDES (CHAPTER 2.15)

Hazard statement



| | Precautionary statements | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Prevention | Response | Storage | Disposal | | |
| P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier or the competent authority to specify applicable ignition source(s). P220 Keep/Store away from clothing//combustible materials. Manufacturer/supplier or the competent authority to specify incompatible materials. P234 Keep only in original container. | | P411 + P235 Store at temperatures not exceeding°C/°F. Keep cool. Manufacturer/supplier or the competent authority to specify temperature. P410 Protect from sunlight. P420 Store away from other materials. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). | | |
| P280 Wear protective gloves/eye protection/face protection. Manufacturer/supplier or the competent authority to specify type of equipment. | | | | | |

Hazard category

Type B

Signal word Danger

Heating may cause a fire or explosion H241

ORGANIC PEROXIDES (CHAPTER 2.15)

| | | | | Symbol Flame |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard category | Signal word | Hazard stat | ement | - |
| Type C | Danger | Heating may | r cause a fire H242 | |
| Type D | Danger | Heating may | cause a fire H242 | |
| Туре Е | Warning | Heating may | cause a fire H242 | — |
| Type F | Warning | Heating may | cause a fire H242 | |
| | | Precautionary sta | atements | |
| Preventio | on | Response | Storage | Disposal |
| P210 Keep away from heat/sparks surfaces. – No smoking. Manufacturer/supplier or the c specify applicable ignition sou P220 Keep/Store away from clothin materials. Manufacturer/supplier or the to specify incompatible materia P234 Keep only in original contain P280 Wear protective gloves/eye p protection. Manufacturer/supplier or the c specify type of equipment. | competent authority to irce(s). ing//combustible ne competent authority ials. ner. protection/face | | P411 + P235 Store at temperatures not exceeding °C/ °F. Keep cool Manufacturer/supplier or the competent authority to specify temperature. P410 Protect from sunlight. P420 Store away from other materials. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

CORROSIVE TO METALS (CHAPTER 2.16)

| | | | | | Symbol Corrosion | |
|------------------------------------------|--------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------|--|
| Hazard category | Signal w | vord Haza | rd statement | | 00 | |
| 1 | Warning | May b | be corrosive to metals H290 | | Nor All | |
| | 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. | | | |

| | | | | Symbol Skull and crossbones |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard category | Signal wor | | | |
| 1 | Danger | Fatal if swallowed H3 | 300 | |
| 2 | Danger | Fatal if swallowed H3 | 300 | |
| | | Precautionary statements | | |
| Prevention | 1 | Response | Storage | Disposal |
| P264 | | P301 + P310 | P405 | P501 |
| Wash thoroughly after hand Manufacturer/supplier or the to specify parts of the body to be handling. P270 Do not eat, drink or smoke wh product. | competent authority e washed after nen using this | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P321 Specific treatment (see on this label). Reference to supplemental first aid instruction. - if immediate administration of antidote is required. P330 Rinse mouth. | Store locked up. | Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

| | | | Symbol Skull and crossbones |
|-----------------|-------------|-------------------------|--------------------------------|
| Hazard category | Signal word | Hazard statement | |
| 3 | Danger | Toxic if swallowed H301 | ₩ Sec |

| 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. | | P405 Store locked up. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). | |

| | | | | Symbol Exclamation mark |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard category 4 | Signal word Warning | Hazard statement Harmful if swallowed H | 1302 | 1 |
| | | Precautionary statements | | |
| Preventie | on | Response | Storage | Disposal |
| P264 Wash thoroughly after ha Manufacturer/supplier or the to specify parts of the body to handling. P270 Do not eat, drink or smoke vertices of the specify parts. | ndling. ne competent authority be washed after P | 301 + P312 F SWALLOWED: Call a POISON CENTER or doctor/physician if you feel nwell. 330 Kinse mouth. | | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

Symbol No symbol

| Hazard category | Signal word | Hazard statement | | |
|--------------------------|-------------|----------------------------------------------|---------|----------|
| 5 | Warning | May be harmful if swallowed H303 | | |
| Precautionary statements | | | | |
| Prevention | | Response | Storage | Disposal |
| | | SON CENTER or doctor/ if you feel unwell. | | |

Symbol Skull and crossbones

| Hazard category | Signal word | Hazard statement | | \sim |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Danger | Fatal in contact with | skin H310 | st. to |
| 2 | Danger | Fatal in contact with | skin H310 | |
| | | Precautionary statements | - | |
| Prevention | | Response | Storage | Disposal |
| P262 Do not get in eyes, on skin, or on clothin P264 Wash thoroughly after handling. Manufacturer/supplier or the competer to specify parts of the body to be washed thandling. P270 Do not eat, drink or smoke when using product. P280 Wear protective gloves/protective cloth Manufacturer/supplier or the competent at specify type of equipment. | soap an P310 Immed doctor/ P322 Specific Refection ing. athority to P361 Remove P363 | SKIN: Gently wash with plenty of and water. diately call a POISON CENTER or c/physician. fic measures (see on this label). ference to supplemental first aid | P405 Store locked up. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

Symbol Skull and crossbones

| | | | | Skull and crossbones |
|---------------------------------------------------------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard category | Signal wor | rd Hazard statement | | \sim |
| 3 | Danger | Toxic in contact wi | th skin H311 | |
| | | Precautionary statement | ts | |
| Prevention | n | Response | Storage | Disposal |
| P280 Wear protective gloves/protect Manufacturer/supplier or the co specify type of equipment. | 0 | 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>. P361 Remove/Take off immediately all | | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

contaminated clothing.

Wash contaminated clothing before

P363

reuse.

| | | | | | Symbol Exclamation mark |
|------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------|------------------------------------------------------------------------------------------------------------|
| Hazard category | Signal wor | d Hazard statement | | | |
| 4 | Warning | Harmful in contact v | vith skin H312 | | Y |
| | | Precautionary statements | 5 | | |
| Preventi | on | Response | Storage | | Disposal |
| P280 Wear protective gloves/prote Manufacturer/supplier or the c specify type of equipment. | ective clothing. competent authority to | P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P312 Call a POISON CENTER or doctor/ physician if you feel unwell. | | in ac | e of contents/container to ecordance with local/regional/ l/international regulations (to ified). |
| | | 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. | | | |

| | | | Symbol No symbol | | |
|----------------------------|--------------------------------------------------------------------------|----------------------|---------------------|--|--|
| Hazard category Signal wor | d Hazard statement | | | | |
| 5 Warning | May be harmful in co | ntact with skin H313 | | | |
| | Precautionary statements | | | | |
| Prevention | Response | Storage | Disposal | | |
| | P312 Call a POISON CENTER or doctor/ physician if you feel unwell. | | | | |

| | | | | Symbol Skull and crossbones |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard category | Signal wor | d Hazard statement | | ~ |
| 1 | Danger | Fatal if inhaled H330 |) | State |
| 2 | Danger | Fatal if inhaled H330 |) | |
| | | Precautionary statements | | |
| Preventie | 0 n | Response | Storage | Disposal |
| P260 Do not breathe dust/fume/ga Manufacturer/supplier or the c specify applicable conditions. P271 Use only outdoors or in a we | ompetent authority to | P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 Immediately call a POISON CENTER or doctor/physician. | P403 + P233 Store in a well-ventilated place. Keep container tightly closed. - if product is volatile so as to generate hazardous atmosphere. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |
| P284 Wear respiratory protection Manufacturer/supplier or the c specify equipment. | | | P405 Store locked up. | |

Hazard statement

Toxic if inhaled H331

Signal word

Danger

Hazard category

3

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



| 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> | Store in a well-ventilated place. Keep container tightly closed. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). | |

| | | | | Symbol Exclamation mark |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------------------|
| Hazard category 4 | Signal wor Warning | d Hazard statement Harmful if inhaled H | 332 | ! |
| | | Precautionary statements | s | |
| Preventio | n | Response | Storage | Disposal |
| P261 Avoid breathing dust/fume/gas/mist/vapours/s Manufacturer/supplier or the cospecify applicable conditions. P271 Use only outdoors or in a well | spray. ompetent authority to | 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. | | |

Symbol Symbol Symbol

| Hazard category | Signal wor | d Hazard statement | | |
|-----------------|------------|-----------------------------------------------------------------------------------------------|------------|----------|
| 5 | Warning | May be harmful if in | haled H333 | |
| | | Precautionary statement | s | |
| Prev | vention | Response | Storage | Disposal |
| | | P304 + P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell. | | |

SKIN CORROSION/IRRITATION (CHAPTER 3.2)

Hazard statement

Symbol Corrosion

Hazard category 1A to 1C Signal word Danger

Causes severe skin burns and eye damage H314



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

SKIN CORROSION/IRRITATION (CHAPTER 3.2)

Hazard statement

Causes skin irritation H315

Signal word

Warning

Hazard category

2

| | ST/SC page 9 |
|------|-----------------|
| l | 94 G/A |
| mark | <u>.</u> |
| | 10/ |
| | 0/34/A |
| | /Ac |
| |] d. |
| | ω |

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

| Response P302 + P352 IF ON SKIN: Wash with plenty of soap and | Storage | Disposal |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | |
| water. P321 Specific treatment (see on this label). Reference to supplemental first aid instruction. <i>manufacturer/supplier or the competent</i> <i>authority may specify a cleansing agent if</i> <i>appropriate</i>. P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before | | |
| | Specific treatment (see on this label). Reference to supplemental first aid instruction. manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate. P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 | Specific treatment (see on this label). Reference to supplemental first aid instruction. <i>manufacturer/supplier or the competent</i> <i>authority may specify a cleansing agent if</i> <i>appropriate</i>. P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 |

SKIN CORROSION/IRRITATION (CHAPTER 3.2)

Symbol No symbol

| Hazard category Sig | gnal word Hazard | l statement | |
|---------------------|--------------------------------------------------------------------------|---------------------------|----------|
| 3 Wa | arning Causes | mild skin irritation H316 | |
| | Precautionary | statements | |
| Prevention | Response | Storage | Disposal |
| | P332 + P313 If skin irritation occurs: Get medic advice/attention. | al | |

EYE DAMAGE/IRRITATION (CHAPTER 3.3)

| | | | | Symbol Corrosion |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------|---------------------|
| Hazard category 1 | Signal word Danger | Hazard statement Causes serious eye dam | nage H318 | |
| | | Precautionary statements | | |
| Prevention | | Response | Storage | Disposal |
| P280 Wear eye protection/face protect Manufacturer/supplier or the authority to specify type of e | e competent several minutes quipment. P310 | Rinse cautiously with water for c. Remove contact lenses, if y to do. Continue rinsing. Il a POISON CENTER or | | |

EYE DAMAGE/IRRITATION (CHAPTER 3.3)

| | | | | Symbol Exclamation mark |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------|-----------------------------------|
| Hazard category | Signal word | Hazard statement | | • |
| 2A | Warning | | Causes serious eye irritation H319 | |
| | Prec | autionary statements | | |
| Prevention | Respo | onse | 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 caution several minutes. Remove present and easy to do. C P337 + P313 If eye irritation persists: C advice/attention. | contact lenses, if ontinue rinsing. | | |

EYE DAMAGE/IRRITATION (CHAPTER 3.3)

Symbol No symbol

| Hazard category | Signal word | Hazard statement | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------|----------|
| 2B | Warning | Causes eye irritation H3 | 320 | |
| | | Precautionary statements | | |
| Prevention | | Response | Storage | Disposal |
| P264 Wash thoroughly after handling. Manufacturer/supplier or the competer authority to specify parts of the body to b washed after handling. | e several minut present and e P337 + P313 | Rinse cautiously with water for es. Remove contact lenses, if asy to do. Continue rinsing. on persists: Get medical | | |

SENSITIZATION - RESPIRATORY (CHAPTER 3.4)

| Hazard category Sig | gnal word | Hazard statement | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Danger | | May cause allergy or asthma inhaled H334 | symptoms or breathing diffic | ulties if |
| | | Precautionary statements | | |
| Prevention |] | Response | Storage | Disposal |
| P261 Avoid breathing dust/fume/gas/mist/vapou spray. Manufacturer/supplier or the competent authority to specify applicable conditions. P285 In case of inadequate ventilation wear respiratory protection. Manufacturer/supplier or the competent authority to specify equipment. | to fresh air and keep comfortable for brea P342 + P311 | at rest in a position athing. ratory symptoms: Call a | | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |

ST/SG/AC.10/34/Add.3 page 99

SENSITIZATION - SKIN (CHAPTER 3.4)

| | | | | | Symbol Exclamation mark |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------|-------|-----------------------------------------------------------------------------------------------------------|
| Hazard category | Signal word | Hazard statement | | | |
| 1 | Warning | May cause an allergic skin reacti | ion H317 | | I |
| | | Precautionary statements | | | |
| Prevention | | Response | Storage | | Disposal |
| P261 Avoid breathing dust/fume/gas/mist/vap spray. Manufacturer/supplier or the competent authority to specify applicable conditions. P272 Contaminated work clothing should not allowed out of the workplace. P280 Wear protective gloves. Manufacturer/supplier or the competent authority to specify type of equipment. | water. P333 + P313 If skin irritatiadvice/attenti P321 Specific treation Reference to authority may appropriate. P363 | ion or rash occurs: Get medical | | in ac | e of contents/container to cordance with local/regional/ l/international regulations (to ified). |

GERM CELL MUTAGENICITY (CHAPTER 3.5)

| | | | | Symbol Health hazard |
|-----------------|-------------|--------------------------------------------------------|------------------------------------------------------|--------------------------------|
| Hazard category | Signal word | Hazard statement | | • |
| 1 | Danger | May cause genetic defects | s <> H340 | |
| 2 | Warning | Suspected of causing gene | etic defects <> H341 | |
| | | <> (state route of expos other routes of exposure c | ure if it is conclusively proven ause the hazard) | n that no |
| | | Precautionary statements | | |
| Prevention | | Response | Storage | Disposal |

| Prevention | Response | Storage | Disposal |
|-----------------------------------------------------------|--------------------------------------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| - | P308 + P313 IF exposed or concerned: Get medical advice/attention. | | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). |
| P281 Use personal protective equipment as required. | | | |

CARCINOGENICITY (CHAPTER 3.6)

| 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. | 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). | | | |
| P281 Use personal protective equipment as required. | | | | | | |

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 | |

Г

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. | | 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 No symbol

| Hazard category Signa | l word | Hazard statement | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------|--------------------|----------|
| (additional) No sig | gnal word | May cause harm to breast | -fed children H362 | |
| | | Precautionary statements | | |
| Prevention | | Response | Storage | Disposal |
| P201 | P308 + P313 | | | |
| Obtain special instructions before use. | - | concerned: Get medical | | |
| P260 | advice/attenti | on. | | |
| Do not breathe dusts or mists. - if inhalable particles of dusts or mists may occur during use. | | | | |
| P263 Avoid contact during pregnancy/while nursing | | | | |
| P264Wash thoroughly after handling. Manufacturer/supplier or the competent authot to specify parts of the body to be washed after handling. | ity | | | |
| P270 | | | | |
| Do not eat, drink or smoke when using this | | | | |
| product. | | | | |

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

| Hazard category | Signal word | Hazard statement | _ |
|-----------------|-------------|--------------------------------------------------------------------|---|
| 1 | Danger | Causes damage to organs <> <<>> H370 | |
| | | <> (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) | |
| | | Due courtier our statements | |

| Precautionary statements | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Prevention | Response | Storage | Disposal | | |
| P260 Do not breathe dust/fume/gas/mist/vapours/spray. Manufacturer/supplier or the competent authority to specify applicable conditions. P264 Wash thoroughly after handling. Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. | P307 + P311 IF exposed: Call a POISON CENTER or doctor/physician. P321 Specific treatment (see on this label). Reference to supplemental first aid instruction. <i>if immediate measures are required.</i> | P405 Store locked up. | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). | | |
| P270 Do not eat, drink or smoke when using this product. | | | | | |

(CHAPTER 3.8) Symbol Health hazard Hazard category Signal word Hazard statement Warning May cause damage to organs <...> <<...>>. H371 2 <...> (or state all organs affected, if known) <<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) **Precautionary statements** Prevention Response Storage Disposal P309 + P311P405 P260 P501 Do not breathe dust/fume/gas/mist/vapours/spray. IF exposed or if you feel unwell: Call a Store locked up. Dispose of contents/container to ... Manufacturer/supplier or the competent authority to POISON CENTER or doctor/physician. ... in accordance with local/regional/ national/international regulations (to specify applicable conditions. be specified). 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.

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

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

| Hazard category 3 | Signal wor Warning | d Hazard statement May cause respiratory irritation; or H335 May cause drowsiness and dizziness H336 | | Exclamation mark | | |
|----------------------|------------------------------|------------------------------------------------------------------------------------------------------------|-------------|------------------|--|--|
| | Precautionary statements | | | | | |
| Preventio | n | Response | Storage | Disposal | | |
| P261 | | P304 + P340 | P403 + P233 | P501 | | |

Store in a well-ventilated

- if product is volatile so as

place. Keep container

to generate hazardous

tightly closed.

atmosphere.

Store locked up.

P405

IF INHALED: Remove victim to fresh air

and keep at rest in a position comfortable

Call a POISON CENTER or doctor/

physician if you feel unwell.

for breathing.

P312

Avoid breathing

P271

dust/fume/gas/mist/vapours/spray.

specify applicable conditions.

Manufacturer/supplier or the competent authority to

Use only outdoors or in a well-ventilated area.

| ST/SG page 1 |
|-----------------|
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| Id.3 |

Symbol

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)

| Hazard category | Signal word | Hazard statement | |
|-----------------|-------------|------------------------------------------------------------------------------------|---|
| 1 | Danger | Causes damage to organs <> through prolonged or repeated exposure <<>>. H372 | |
| | | <> (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 | | |
| Do not breathe dust/fume/gas/mist/vapours/spray. | 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). | | |
| to specify parts of the body to be washed after handling. P270 Do not eat, drink or smoke when using this product. | | | | | |

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

| 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. | | | P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). | |

ASPIRATION HAZARD (CHAPTER 3.10)

| Hazard category | Signal word | Hazard statement | | | |
|--------------------------|------------------------------------------------------------------------------|-----------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1 | Danger | May be fatal if swallowe | | | |
| 2 | Warning | May be harmful if swallowed and enters airways H305 | | | |
| Precautionary statements | | | | | |
| Prevention | Re | sponse Storage | | Disposal | |
| | P301 + P310 IF SWALLOWED: POISON CENTER (P331 Do NOT induce vom | Immediately call a or doctor/physician. | 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 | Signal wore | d Hazard statement | | XV. | |
| 1 | Warning | Very toxic to aquatic life H400 | | 1/2 | |
| Precautionary statements | | | | | |
| Prevention | | Response | Storage | Disposal | |
| P273 Avoid release to the environment. - if this is not the intended use. | | 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)

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Symbol No symbol

| Hazard category | egory Signal word | | Hazard statement | | |
|-----------------------------------------------------------------------------------------------|-------------------|------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 2 | No signal | word Toxic to aquatic life H | Toxic to aquatic life H401 | | |
| 3 | No signal | word Harmful to aquatic life | e H402 | | |
| Precautionary statements | | | | | |
| Prevention Res | | 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 | | d Hazard statement | Hazard statement | | | |
| 1 | Warning | | Very toxic to aquatic life with long lasting effects H410 | | | |
| 2 | No signal w | <i>vord</i> Toxic to aquatic life v | vith long lasting effects H411 | | | |
| Precautionary statements | | | | | | |
| Prevention | | Response | Response Storage | | | |
| 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 No symbol | |
|--------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------|---------|-----------|-----------------------------------------------------------------------------------|--|
| Hazard category | tegory Signal word Hazard statement | | | | | |
| 3 | No signal word | word Harmful to aquatic life with long lasting effects H412 | | | | |
| 4 | No signal word | May cause long lasting harmful effects to aquatic life H413 | | | | |
| Precautionary statements | | | | | | |
| Prevention | | Response | Storage | | Disposal | |
| P273 Avoid release to the environment. - if this is not the intended use | | | | in accord | contents/container to lance with local/regional/ ernational regulations (to | |

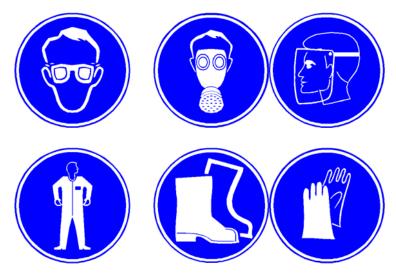
Annex 3

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)











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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.".

<u>Consequential amendment</u>: 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).