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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 the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals on its tenth session

held in Geneva on 11 December 2020

Addendum

Annex III

Amendments to the eighth revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) (ST/SG/AC.10/30/Rev.8)

Chapter 1.2

Insert the following paragraph before "For the purposes of the GHS:":

"This Chapter provides definitions and abbreviations of general applicability that are used in the GHS. Additional definitions of the individual hazard classes are presented in the relevant chapters."

Delete the following definitions and related notes (when applicable):

"CA", "CBI", "Chemically unstable gas", "Compressed gas", "Corrosive to metal", "Desensitized explosives", "Dissolved gas", "Explosive article", "Explosive substance", "Flammable gas", "Flammable liquid", "Flammable solid", "Liquefied gas", "Organic peroxide", "Oxidizing gas", "Oxidizing liquid", Oxidizing solid", "Pyrophoric gas", "Pyrophoric liquid", "Pyrophoric solid", "Pyrotechnic article", "Pyrotechnic substance", "Readily combustible solid", "Refrigerated liquefied gas", "Self-heating substance", "Self-reactive substance" and "Substance which, in contact with water, emits flammable gases".

Consequential amendments:

- Chapter 1.5, paragraph 1.5.3.1.3 and related footnote 1: delete "(CA)";
- Annex 4, paragraph A4.1.1: delete "(CA)"
- Annex 4, paragraph A4.2.1: Delete "(CA)" in the second sentence and replace "CA" by "competent authority" in the third sentence.
- Chapter 1.4 (paragraphs 1.4.8.1, 1.4.8.3 (a), (b), (c) and (f); 1.4.10.5.2 (d) (iv)); Chapter 1.5 (Table 1.5.2 note under item 3); and Annex 4 (note under A4.3.3): Delete "(CBI)" and replace "CBI" with "Confidential business information", as applicable.

Amend the definitions of "**MARPOL**" and "**Recommendations on the Transport of Dangerous Goods, Model Re**" to read as follows:

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

"***UN Model Regulations*** means the Model Regulations annexed to the latest revised edition of the Recommendations on the Transport of Dangerous Goods published by the United Nations".

Consequential amendment: In the GHS, replace all references to "UN Recommendations on the Transport of Dangerous Goods, Model Regulations", "Recommendations on the Transport of Dangerous Goods, Model Regulations" and "UN Recommendations for the Transport of Dangerous Goods" with "UN Model Regulations".

Insert a definition for "VDI" to read as follows:

"***VDI*** means the "Association of German Engineers" ("*Verein Deutscher Ingenieure"*).

Consequential amendment: Delete note and footnote "*" in Annex 4 (table A4.3.9.3) and in Annex 11 (paragraph A11.2.8.1).

Move to Chapter 1.2 the following definitions currently in footnotes 5, 8, 9, 11 to 15 and 17 and 18 in Annex 4, and place them in the alphabetical order:

"ADN means the European Agreement concerning the International Transport of Dangerous Goods by Inland Waterways, as amended.

EGC Code means the Code for Existing Ships Carrying Liquefied Gases in Bulk.

GC Code means the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (Gas Carrier Code).

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

IGC Code means the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, including applicable amendments to which the vessel has been certified.

IMDG Code means the International Maritime Dangerous Goods code, as amended.

IMSBC Code means the International Maritime Solid Bulk Cargoes Code, as amended.

Consequential amendment: Delete the footnote to note 1 under table 2.14.1 in Chapter 2.14.

Rotterdam Convention means the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.".

SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended.

Stockholm Convention means the Stockholm Convention on Persistent Organic Pollutants.

Consequential amendment: *Delete footnotes 4 to 18 in Annex 4.*

Chapter 1.4

1.4.4.3 Replace (twice) "label components" with "label elements".

1.4.10.5.5.1 In the last sentence of the third paragraph, replace "labelled with the main components" with "labelled with the product identifier".

Chapter 1.5

1.5.3.2.1 In item 9, delete "and safety characteristics".

Chapter 2.1

"CHAPTER 2.1

EXPLOSIVES

2.1.1 Definitions and general considerations

2.1.1.1 ***Definitions***

An *explosive substance or mixture* is a solid or liquid substance or mixture which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic substances and mixtures are included even when they do not evolve gases.

A *pyrotechnic substance or mixture* is a substance or mixture designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions.

An *explosive article* is an article containing one or more explosive substances or mixtures.

Division means the classification of an explosive substance, mixture or article according to Part I of the *Manual of Tests and Criteria* and relates to it being in a certain configuration.

Primary packaging means the minimum level of packaging of a configuration assigned a division, in which the explosive substance, mixture or article is intended to be retained until use.

NOTE: *Divisions are generally assigned for the purpose of transport and may be subject to further packaging specifications according to the UN Model Regulations to be valid.*

2.1.1.2 ***Scope***

2.1.1.2.1 Except as provided in 2.1.1.2.2, the class of explosives comprises

(a) Explosive substances and mixtures;

(b) Explosive articles, except devices containing explosive substances or mixtures in such quantity or of such a character that their inadvertent or accidental ignition or initiation shall not cause any effect external to the device either by projection, fire, smoke, heat or loud noise; and

(c) Substances, mixtures and articles not mentioned under (a) and (b) above which are manufactured with the view to producing a practical explosive or pyrotechnic effect.

2.1.1.2.2 The following substances and mixtures are excluded from the class of explosives:

(a) Ammonium nitrate-based emulsions, suspensions or gels which meet the criteria of test series 8 of the *Manual of Tests and Criteria* for classification as ANEs of Category 2 oxidizing liquids (Chapter 2.13) or Category 2 oxidizing solids (Chapter 2.14).

(b) Substances and mixtures which meet the criteria for classification as desensitized explosives according to the criteria of Chapter 2.17.

(c) Substances and mixtures which have not been manufactured with the view to producing, in themselves, an explosive or pyrotechnic effect and which:

(i) are self-reactive substances and mixtures according to the criteria of Chapter 2.8; or

(ii) are organic peroxides according to the criteria of Chapter 2.15; or

(iii) are deemed not to have explosive properties on basis of the screening procedures in Appendix 6 of the *Manual of Tests and Criteria*; or

(iv) are too insensitive for inclusion in the hazard class according to test series 2 of the *Manual of Tests and Criteria*; or

(v) are excluded from assignment within Class 1 of the *UN Model Regulations* based on results in test series 6 of the *Manual of Tests and Criteria*.

NOTE: *Performing test series 2 requires a substantial amount of material, which may not be available in the initial stages of research and development. Substances and mixtures in the research and development phase for which not enough material exists to perform test series 2 of the Manual of Tests and Criteria may, for the purpose of further scientific*

characterisation, be regarded as self-reactive substances and mixtures Type C (see Chapter 2.8), provided that:

(a) The substance or mixture is not manufactured with the view to producing an explosive or pyrotechnic effect; and

(b) The decomposition energy of the substance or mixture is less than 2000 J/g; and

(c) The result in test 3 (a) and test 3 (b) of the Manual of Tests and Criteria is negative; and

(d) The result in test 2 (b) of the Manual of Tests and Criteria is "no explosion" at an orifice diameter of 6 mm; and

(e) The expansion of the lead block in Test F.3 of the Manual of Tests and Criteria is less than 100 ml per 10 g substance or mixture.

2.1.1.2.3 For explosive articles that are assigned a specific UN number in a class other than Class 1 according to the Dangerous Goods List of the *UN Model Regulations*, the following applies.

2.1.1.2.3.1 Explosive articles that are assigned a specific UN number in Class 2, 3, 4 or 5 are classified in the GHS hazard class and, where available, category corresponding to the transport classification, and excluded from the hazard class explosives, provided that:

(a) they are in the transport configuration; or

(b) the transport classification does not depend on a particular configuration; or

(c) they are in use, see 2.1.1.3.4.

2.1.1.2.3.2 Explosive articles that are assigned a specific UN number in Class 9 are classified as explosives in Sub-category 2C, provided that:

(a) they are in the transport configuration; or

(b) the transport classification does not depend on a particular configuration; or

(c) they are in use, see 2.1.1.3.4.

NOTE 1: *Subject to approval from the competent authority, explosive articles that are assigned a specific UN number in division 6.1 within Class 6 or in Class 8 may be classified in the GHS hazard class and, where available, category corresponding to the transport classification, and excluded from the hazard class explosives, provided that conditions (a) to (c) of 2.1.1.2.3.1 are met.*

NOTE 2: *According to the UN Model Regulations, articles are normally not assigned packing groups and hence a category within the corresponding GHS hazard class cannot always be assigned on this basis. Expert judgement should be used to assign an appropriate category in these cases, taking into account the GHS classification of the substances or mixtures contained.*

2.1.1.3 *Other considerations*

2.1.1.3.1 *The relation to the classification according to the UN Model Regulations*

The GHS classification of substances, mixtures and articles as explosives builds largely on the classification used for transport according to the *UN Model Regulations*. Information on their transport division and, when available, some of the underlying test results according to Part I of the *Manual of Tests and Criteria*, is therefore relevant for the GHS classification. Test data is not required when classification using expert judgement is possible based on available information from previous testing and characterization. Where appropriate, analogy to tested explosives may be used, taking into consideration whether

changes to the configuration may affect the hazard posed compared to the tested configuration. While the transport divisions are designed for the purpose of safe transport of explosives, the GHS classification draws from this classification to ensure appropriate hazard communication in other sectors, in particular supply and use. In doing this, any mitigating effects of the transport configuration on the explosive behaviour, such as a particular packaging, are evaluated as they may not be present in sectors outside of transport.

2.1.1.3.2 *The configuration dependence of the division*

Entry into the hazard class of explosives is based on the intrinsic explosive properties of substances and mixtures. The assignment to a division, however, is also dependent on the configuration using packaging, and the incorporation into articles of such substances and mixtures. The division is the relevant level of classification when the explosive is in the configuration to which the division was assigned, e.g. when transported or stored, and may form the basis for explosives licencing and safety measures such as distance requirements. The hazard categories, on the other hand, are the relevant level of classification for the safe handling.

2.1.1.3.3 *The hierarchy of the categories*

Category 2 only contains explosives which have been assigned to a division and corresponds to Class 1 of the *UN Model Regulations*. The sub-categories within Category 2 classify explosives on basis of the hazardous behaviour of the explosive in its primary packaging or, where applicable, of the explosive article alone. An explosive that has not been assigned a division is classified in Category 1 of the hazard class of explosives. This may be because it is considered too dangerous to be assigned a division, or because it is not (yet) in a suitable configuration to assign it to a division. Explosives in Category 1 are therefore not necessarily more hazardous than explosives in Category 2.

2.1.1.3.4 *Change of classification over the life cycle*

As the assignment to a division depends on the configuration, the classification of an explosive may change over its life cycle as a result of reconfiguration. An explosive that was assigned a division in a certain configuration, and hence classified in a sub-category within Category 2, may no longer retain that division when out of that configuration. If assigned to another division in the new configuration, it may need to be classified in another sub-category within Category 2, and if not assigned a division it should be classified in Category 1. However, the use of an explosive, meaning the preparation and intentional functioning, including removal from the primary packaging for functioning or installation or deployment in readiness for functioning, is not intended to require such re-classification.

2.1.1.3.5 *Exclusions from the hazard class*

Some substances, mixtures and articles that have explosive properties are excluded from the hazard class of explosives because they are not considered sensitive enough or because they do not present a significant explosion hazard in a particular configuration. The safety data sheet is an appropriate means to convey information on explosive properties for such substances and mixtures, and the explosion hazards of such articles (see Chapter 1.4).

2.1.2 Classification criteria

2.1.2.1 Explosive substances, mixtures and articles of this class are classified into one of two categories, and for Category 2 into one of three sub-categories according to the following table:

Table 2.1.1: Criteria for explosives

Category	Sub-category	Criteria
1		Explosive substances, mixtures and articles which (a) have not been assigned a division and which (i) are manufactured with the view of producing an explosive or pyrotechnic effect; or (ii) are substances or mixtures which show positive results when tested in test series 2 of the *Manual of Tests and Criteria* or (b) are out of the primary packaging of the configuration to which a division was assigned[a], unless they are explosive articles assigned a division: (i) without a primary packaging; or (ii) in a primary packaging that does not attenuate the explosive effect, taking into account also intervening packaging material, spacing or critical orientation.
2	**2A**	Explosive substances, mixtures and articles which have been assigned (a) Division 1.1, 1.2, 1.3, 1.5 or 1.6; or (b) Division 1.4 and are not meeting the criteria for sub-category 2B or 2C.[b]
	2B	Explosive substances, mixtures and articles which have been assigned Division 1.4 and a compatibility group other than S, and which: (a) do not detonate and disintegrate when functioned as intended; and (b) exhibit no high hazard event[c] in test 6 (a) or 6 (b) of the *Manual of Tests and Criteria*; and (c) do not require attenuating features, other than that which may be provided by a primary packaging, to mitigate a high hazard event[c].
	2C	Explosive substances, mixtures and articles which have been assigned Division 1.4 compatibility group S, and which: (a) do not detonate and disintegrate when functioned as intended; and (b) exhibit no high hazard event[c] in test 6(a) or 6(b), or in the absence of these test results, similar results in test 6(d) of the *Manual of Tests and Criteria*; and (c) do not require attenuating features, other than that which may be provided by a primary packaging, to mitigate a high hazard event[c].

[a] *Explosives in Category 2 that are removed from their primary packaging for use remain classified in Category 2, see 2.1.1.3.4.*

[b] *The manufacturer, supplier or competent authority may classify an explosive of Division 1.4 as sub-category 2A on basis of data or other considerations even if it meets the technical criteria for sub-category 2B or 2C.*

[c] *A high hazard event is exhibited when performing test 6 (a) or 6 (b), according to the Manual of Tests and Criteria, by:*

(i) a significant change in the witness plate shape, such as perforation, gouge, substantial dent or bowing; or

(ii) instantaneous scattering of most of the confining material.

2.1.2.2 The divisions are as follows:

(a) Division 1.1: Substances, mixtures and articles which have a mass explosion hazard (a mass explosion is one which affects almost the entire quantity present virtually instantaneously);

(b) Division 1.2: Substances, mixtures and articles which have a projection hazard but not a mass explosion hazard;

(c) Division 1.3: Substances, mixtures and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard:

(i) combustion of which give rise to considerable radiant heat; or

(ii) which burn one after another, producing minor blast or projection effects or both;

(d) Division 1.4: Substances and articles which present no significant hazard: substances, mixtures and articles which present only a small hazard in the event of ignition or initiation. The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire shall not cause virtually instantaneous explosion of almost the entire contents of the package;

(e) Division 1.4 compatibility group S: Substances, mixtures and articles so packed or designed that any hazardous effects arising from accidental functioning are confined within the package unless the package has been degraded by fire, in which case all blast or projection effects are limited to the extent that they do not significantly hinder fire-fighting or other emergency response efforts in the immediate vicinity of the package.

(f) Division 1.5: Very insensitive substances or mixtures which have a mass explosion hazard: substances and mixtures which have a mass explosion hazard but are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions. The probability of transition from burning to detonation is greater when large quantities are present.

(g) Division 1.6: Extremely insensitive articles which do not have a mass explosion hazard: articles which predominantly contain extremely insensitive substances or mixtures and which demonstrate a negligible probability of accidental initiation or propagation. The hazard from articles of Division 1.6 is limited to the explosion of a single article.

NOTE 1: *For some regulatory purposes, the divisions are further subdivided into compatibility groups which identify the kinds of explosives that are deemed to be compatible (see 2.1.2 of the UN Model Regulations, Chapter 2.1).*

NOTE 2: *While Division 1.4 compatibility group S is not a division of its own, this classification corresponds to a separate division based on additional criteria.*

NOTE 3: *For classification tests on explosive substances or mixtures, the tests should be performed on the substance or mixture as presented. If for example, for the purposes of supply or transport, the same substance or mixture is to be presented in a physical form different from that which was tested and which is considered likely to materially alter its performance in a classification test, it must also be tested in the new form.*

2.1.3 Hazard communication

General and specific considerations concerning labelling requirements are provided in Hazard communication: Labelling (Chapter 1.4). Annex 1 contains summary tables about classification and labelling. Annex 3 contains examples of precautionary statements and pictograms which can be used where allowed by the competent authority.

Table 2.1.2: Label elements for explosives

Category	**1**	**2**		
Sub-category	*Not applicable*	**2A**	**2B**	**2C**
Symbol[a]	Exploding bomb	Exploding bomb	Exploding bomb	Exclamation mark
Signal word	Danger	Danger	Warning	Warning
Hazard statement	Explosive	Explosive	Fire or projection hazard	Fire or projection hazard
Additional hazard statement	Very sensitive[b] ***or*** May be sensitive[c]	*Not applicable*	*Not applicable*	*Not applicable*

[a] *For divisions 1.4, 1.5 and 1.6 no symbol appears on the label for transport, according to the UN Model Regulations.*

[b] *To be assigned additionally to explosives that are sensitive to initiation as determined by test series 3 or 4 of the Manual of Tests and Criteria. May also be applied to explosives sensitive to other stimuli, e.g. electrostatic discharge.*

[c] *To be assigned additionally to explosives for which sufficient information on their sensitivity to initiation is not available.*

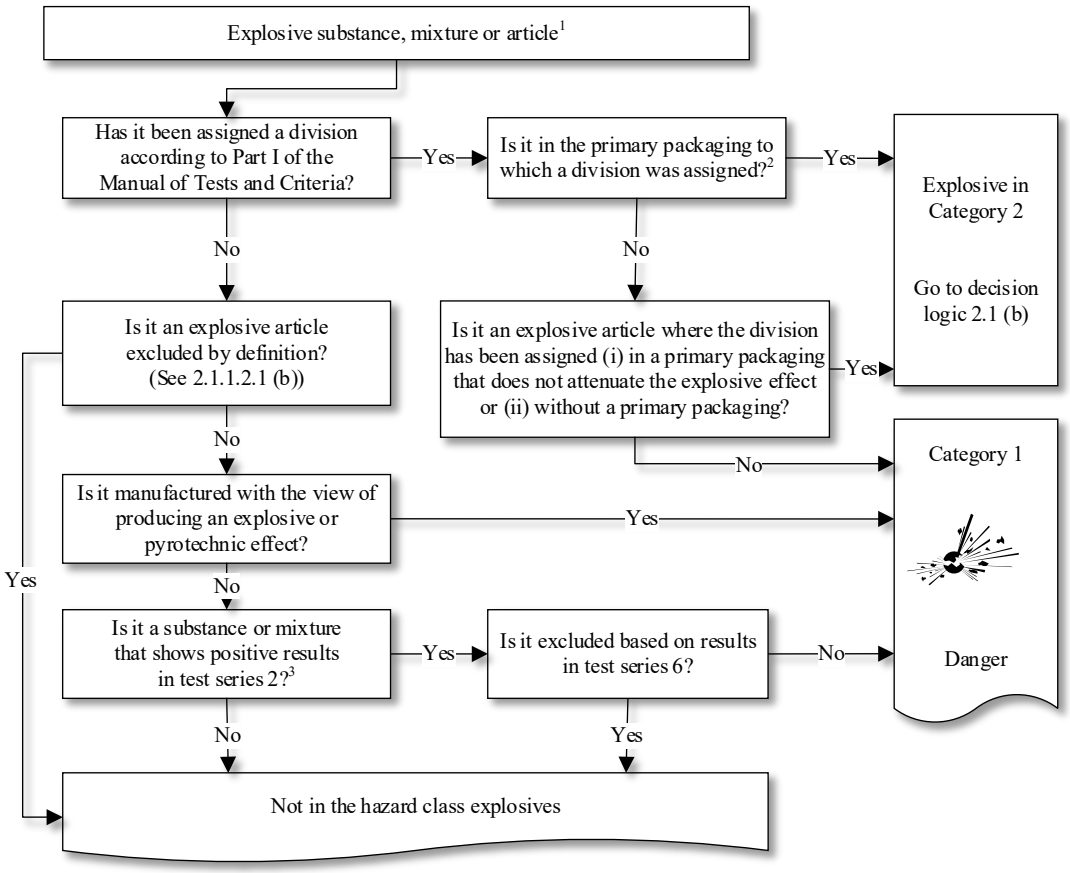
NOTE: *Substances and mixtures excluded by 2.1.1.2.2 (c) (v) still have explosive properties. The user should be informed of these intrinsic explosive properties because they have to be considered for handling – especially if the substance or mixture is removed from its packaging or is repackaged – and for storage. For this reason, the explosive properties of the substance or mixture should be communicated in sub-section 2.3 (Other hazards which do not result in classification) and Section 9 (Physical and chemical properties) or 10 (Stability and reactivity) of the Safety Data Sheet in accordance with Table 1.5.2, and other sections of the Safety Data Sheet, as appropriate.*

2.1.4 Decision logic and guidance

The decision logic and guidance, which follow, are not part of the harmonized classification system, but have been provided here as additional guidance. It is strongly recommended that the person responsible for classification studies the criteria before and during use of the decision logic.

2.1.4.1 *Decision logics*

Decision logic 2.1 (a) for categories of explosives

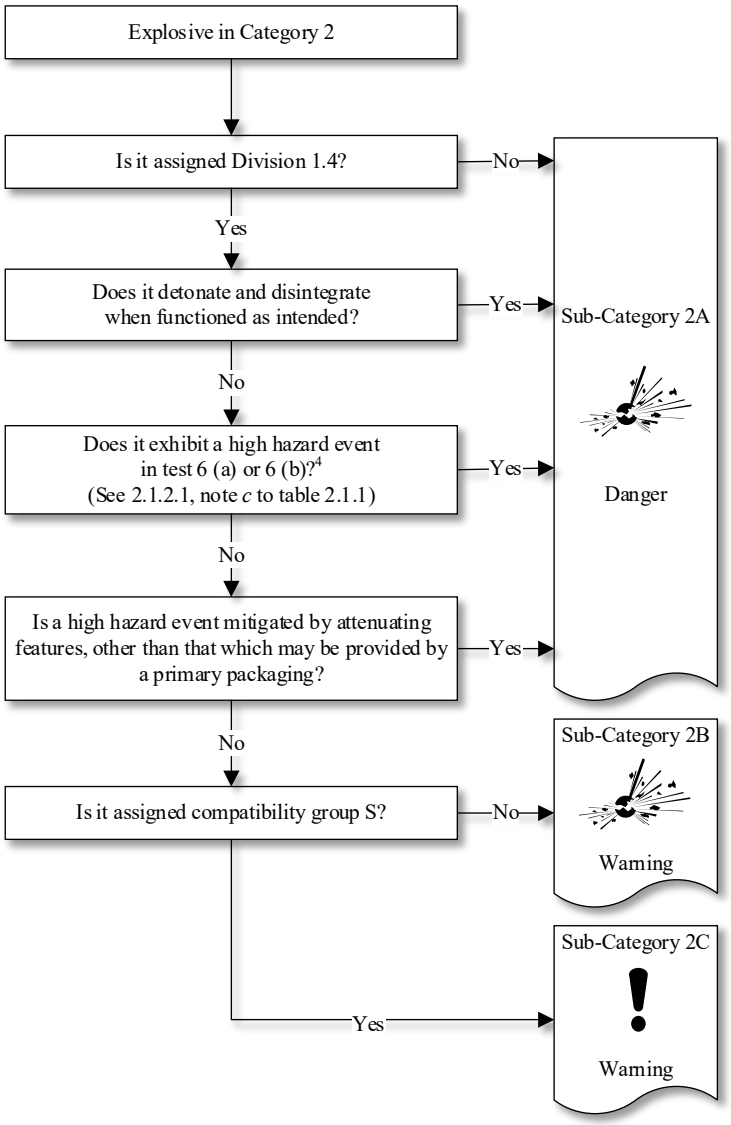


[1] *ANEs, desensitized explosives, organic peroxides and self-reactive substances and mixtures are classified in other hazard classes, see 2.1.1.2.2.*

[2] *Unless it is for use, see 2.1.1.3.4.*

[3] *Screening procedures may be used to avoid testing, see 2.1.1.2.2.*

Decision logic 2.1 (b) for sub-categories of explosives



[4] *In the absence of results from test 6 (a) or 6 (b), results from test 6 (d) may be used to assess whether there was a high hazard event, see 2.1.2.1. If the configuration includes attenuating features that are likely to mitigate a high hazard event, such as spacing or a specific orientation of explosive articles, Sub-category 2A may be assigned without the need to assess test data.*

2.1.4.2 ***Description of explosion hazard levels***

Sub-category	Explosion hazard level
2A	Sub-category 2A represents a high explosion hazard. An explosive in this sub-category has the potential to cause complete destruction of objects and lethal or very severe injuries to persons.
2B	Sub-category 2B represents a medium explosion hazard. An explosive in this sub-category has the potential to cause serious damage to objects and serious injuries to persons. Injuries may result in permanent impairment.
2C	Sub-category 2C represents a low explosion hazard. An explosive in this sub-category can cause minor damage to objects and moderate injuries to persons. Injuries would not normally result in permanent impairment.

2.1.4.3 Principles of explosives classification

2.1.4.3.1 *Assigning explosives to divisions by testing*

2.1.4.3.1.1 Explosives are assigned divisions based on testing of specific configurations, which quantifies levels of blast, projections and fire. Formation of a configuration provides a level of protection from outside stimuli and fixes the sensitivity and hazard magnitude, which enables the assignment to a division. The divisions therefore describe the explosive behaviour in the particular configuration. Such descriptions reflect attenuating properties of the packaging and article, which may include spacing, or specific orientations of explosive articles to mitigate an explosive effect. The configuration is further controlled by design and packaging requirements specified in the *UN Model Regulations*.

2.1.4.3.1.2 Although divisions are not valid outside of the configurations to which they were assigned, they may still be used as a basis for regulatory measures in storage and handling when these configurations are modified. This normally presumes that additional safety measures are taken to account for the modified configurations, e.g. aggregate quantity limits and protective building designs.

2.1.4.3.2 *Assigning explosives to divisions based on analogy*

While classification in a division or a sub-category is based on testing in accordance with Part I of the *Manual of Tests and Criteria*, similar explosives configurations may be classified without testing, where appropriate, based on analogy to tested explosives. The use of analogy should take into consideration whether changes to the configuration may affect the hazard posed compared to the tested configuration, and is narrowly limited according to the quantity, packaging and design of the explosive.

2.1.4.3.3 *Assigning explosives to sub-categories*

2.1.4.3.3.1 Assignment to sub-categories within Category 2 builds on the information provided by the division to better reflect the hazard of the explosive in its primary packaging, which is intended to be retained until use. The primary packaging is all or part of the original tested configuration. It is normally the immediate container or the innermost packaging layer and may include attenuating properties which mitigate hazardous effects. However, only flexible inner packaging such as a thin-wall plastic bag or other unsubstantial material which provides negligible attenuation of explosive effects should not be considered the primary packaging. As explosives are unpackaged from their primary packaging they may present greater sensitivity or blast, projection or fire hazards. Retaining the primary packaging until use and limiting the amount of unpacked explosives are therefore generally important safety measures when handling explosives. When an explosive is installed or deployed and is later removed from use without initiation, it should be replaced in its primary packaging or an identical primary packaging.

2.1.4.3.3.2 Multiple explosive articles may sometimes be supplied where they are in direct contact without any intervening packaging material or spacing, or critical orientation.

Provided all applicable classification evaluation occurred in this configuration, their primary packaging can be discarded without affecting the classification.

2.1.4.3.3.3 Occasionally, larger explosive articles are supplied without any packaging, e.g. in a handling device such as a cradle. In these cases, there may be no primary packaging, i.e. the classification is of the article as such. Handling devices that do not affect the classification can be discarded.

2.1.4.3.4 *Classification of explosives in situations where they cannot be assigned a division*

2.1.4.3.4.1 Explosives in manufacturing processing and otherwise unfinished stages cannot be assigned a division until configured for transport, and hence are assigned to Category 1. Similarly, explosives assigned to Category 2 when taken out of their primary packaging for purposes other than use, are re-assigned to Category 1 (unless their primary packaging can be discarded, see 2.1.4.3.3).

2.1.4.3.4.2 The sensitivity and hazard severity of unpackaged explosives is dependent on non-intrinsic parameters related to the methods used, including quantity, depth, confinement, initiation stimulus, composition, physical state such as particle size, etc. The hazards posed by explosives in Category 1 thus vary extensively and may also vary dynamically as they flow through a process. For these reasons, the hazard communication for Category 1 cannot provide any details regarding the explosive behaviour. Process hazards analysis and risk management principles should be applied in these cases to identify and manage the risk of processes in accordance with best practices and applicable regulations.

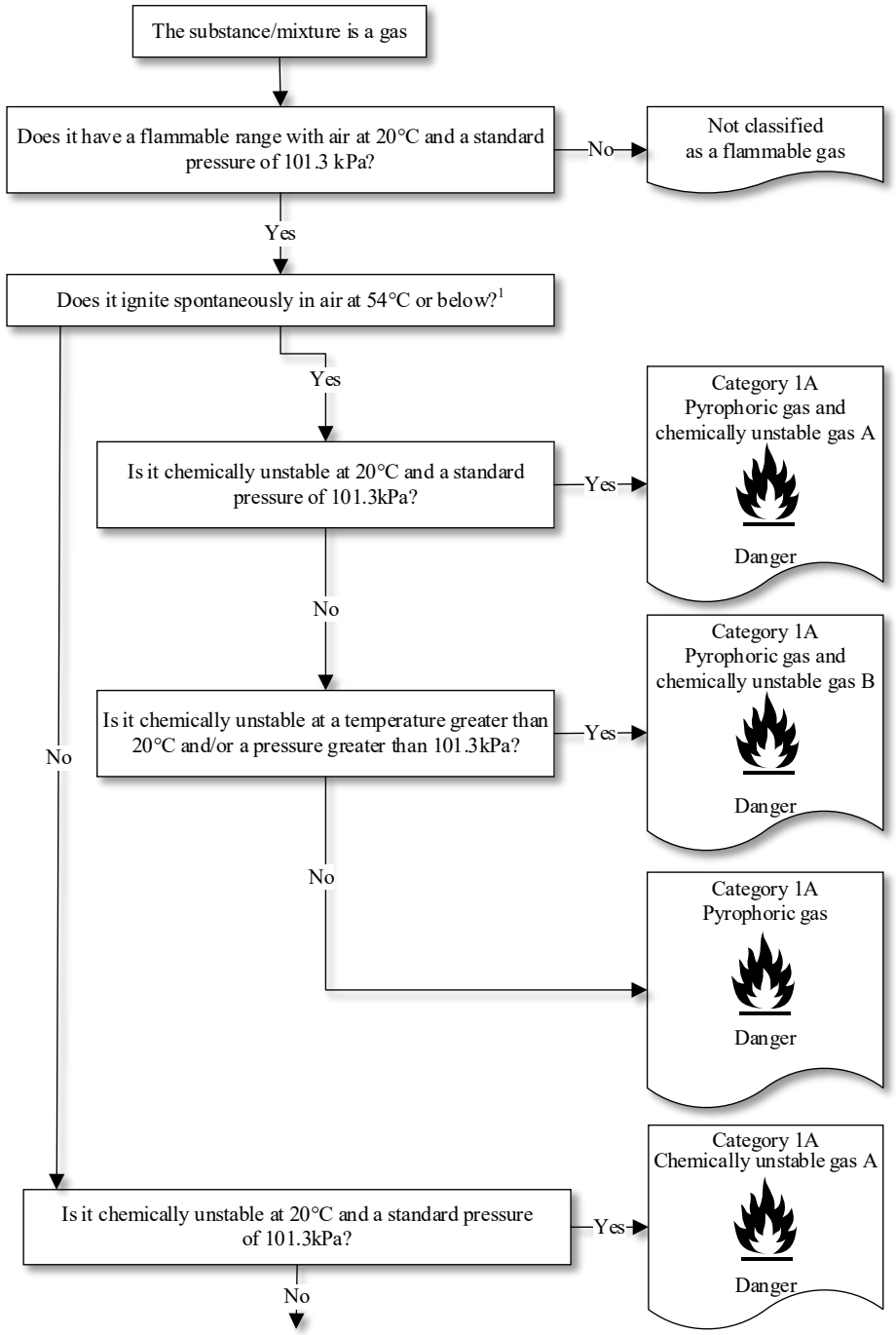
2.1.4.3.5 *Safety related to explosives failing test series 3 or 4*

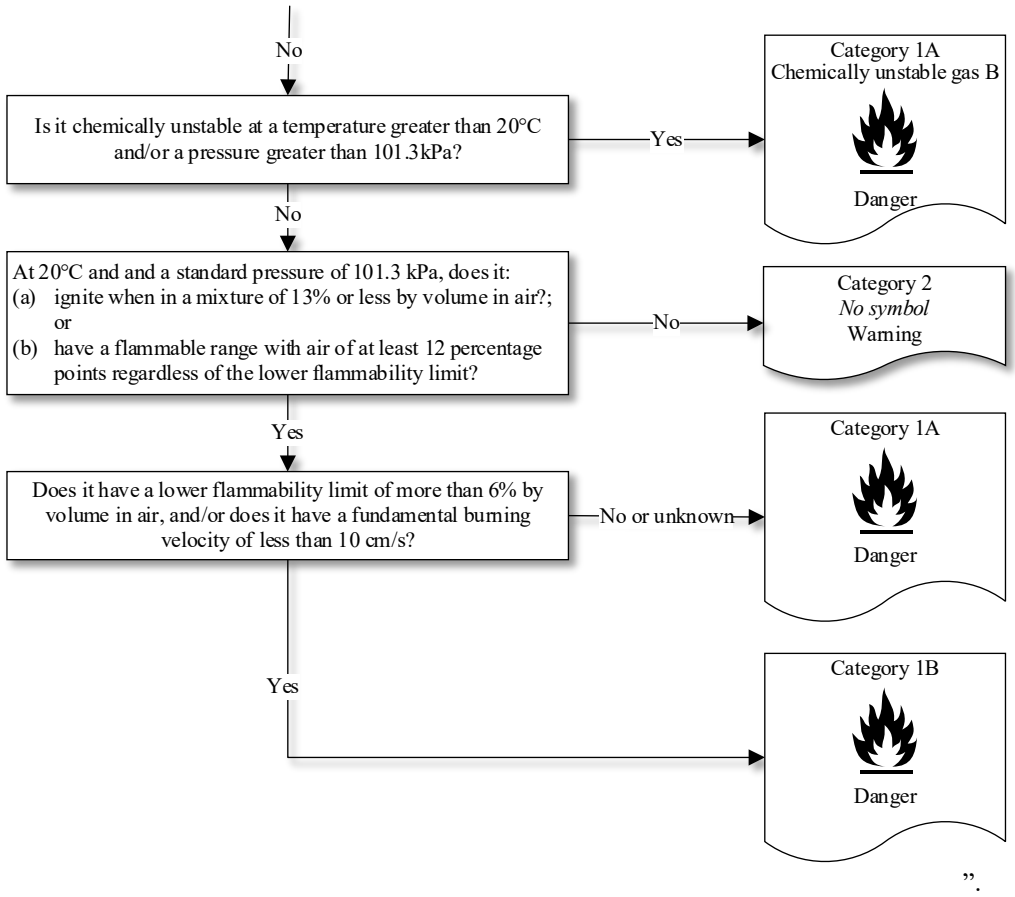
Category 1 also includes explosives that fail test series 3 or test series 4 as configured, having an unacceptable level of sensitivity to stimuli encountered during transport. The thresholds of these tests may not be representative of the energy levels encountered during explosives processing and manufacturing. Furthermore, these tests do not include all types of stimuli that may be encountered, such as electrostatic discharge. Additional investigations of the properties of the explosive at hand may thus be needed for safe processing and handling.”.

Chapter 2.2

2.2.4.1 Replace decision logic 2.2 with the following (*the text of the footnote remains unchanged)*:

"*Decision logic 2.2*





”.

Chapter 2.3

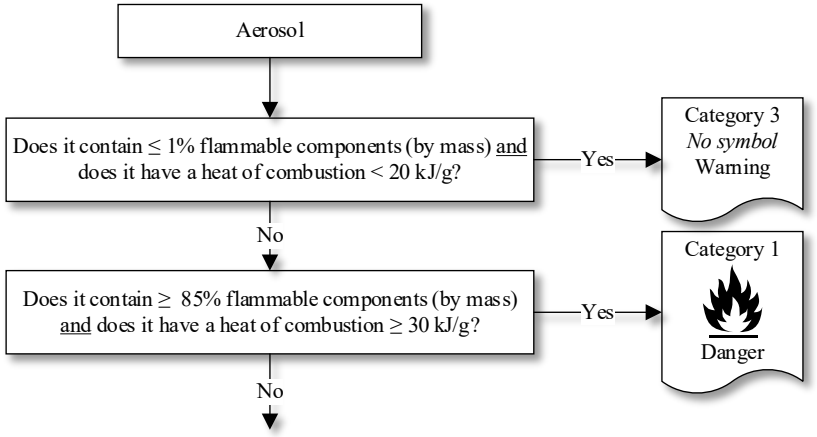
2.3.1.2 In table 2.3.1, under “Criteria”:

Replace “(1)”, “(2)” and “(3)” with “(a)”, “(b)” and “(c)”; and

Replace “(a)”, “(b)”, “(c)” with “(i)”, “(ii)” and “(iii)”.

2.3.1.4 Replace decision logics 2.3.1 (a), (b) y (c) with the following:

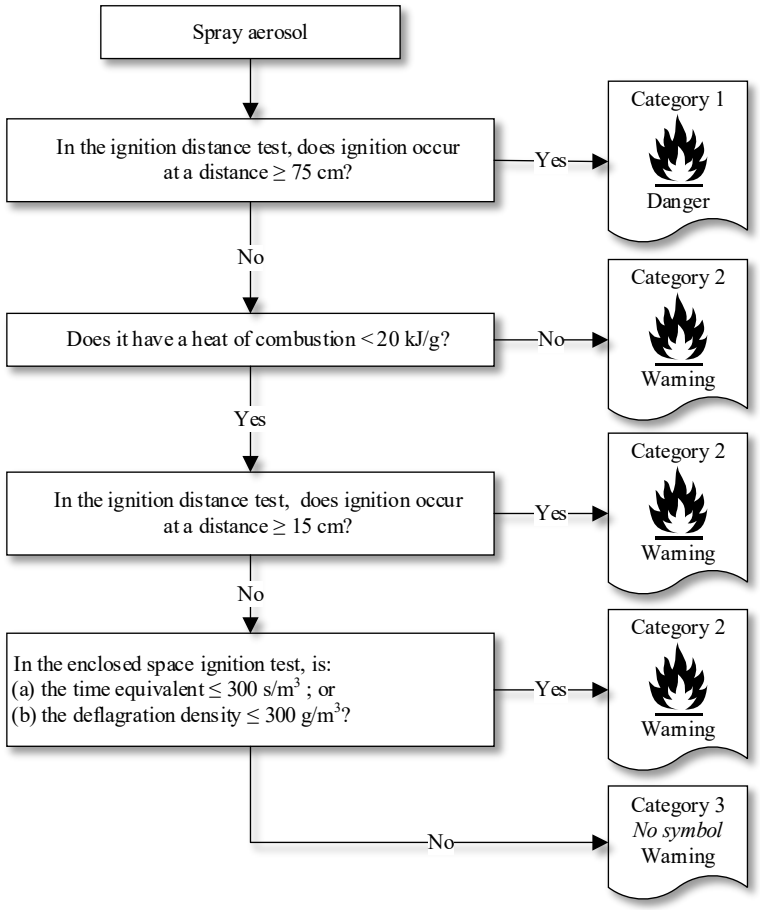
“Decision logic 2.3.1 (a) for aerosols



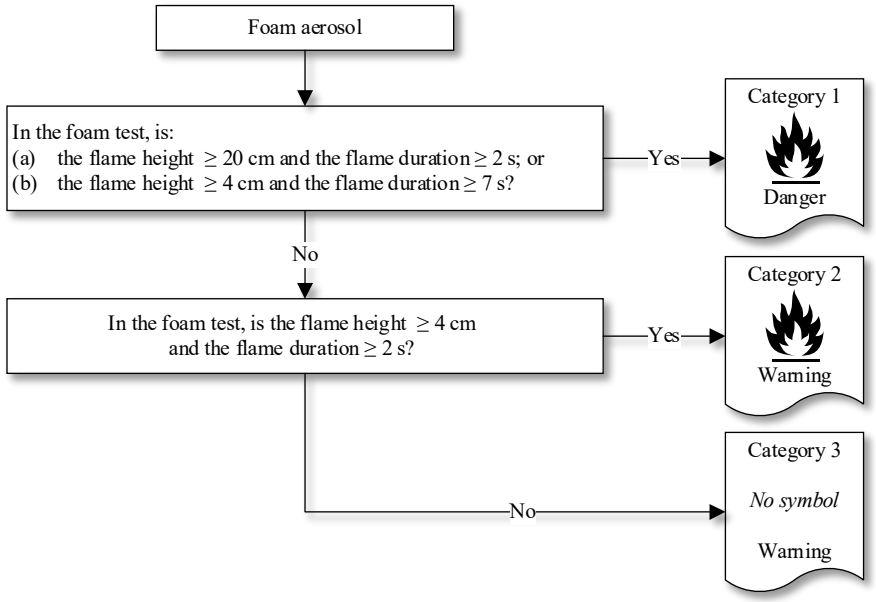
For spray aerosols, go to decision logic 2.3.1 (b)

For foam aerosols, go to decision logic 2.3.1 (c)

Decision logic 2.3.1 (b) for spray aerosols



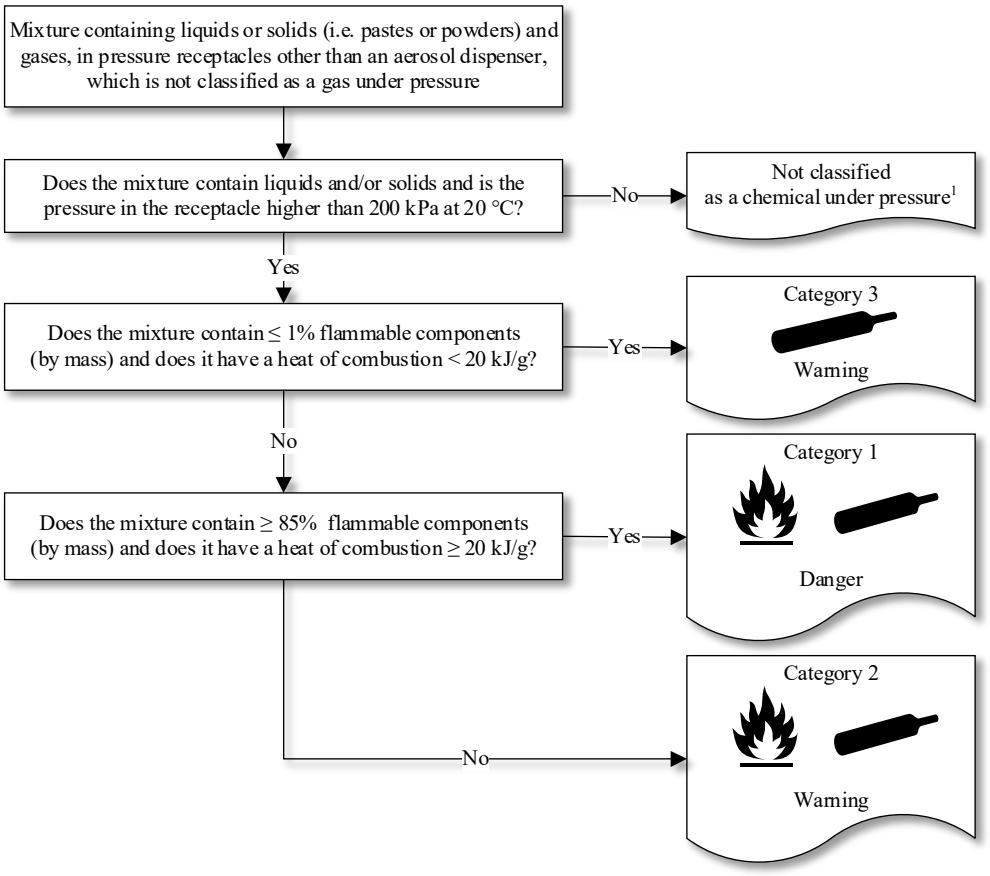
Decision logic 2.3.1 (c) for foam aerosols



"

2.3.2.4.1 Replace decision logic 2.3.2 with the following *(the text of the footnote remains unchanged)*:

"Decision logic 2.3.2 for chemicals under pressure

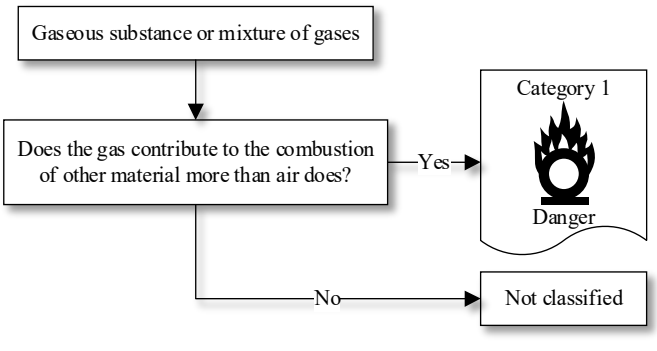


".

Chapter 2.4

2.4.4.1 Replace decision logic 2.4 with the following:

*"**Decision logic 2.4 for oxidizing gases***

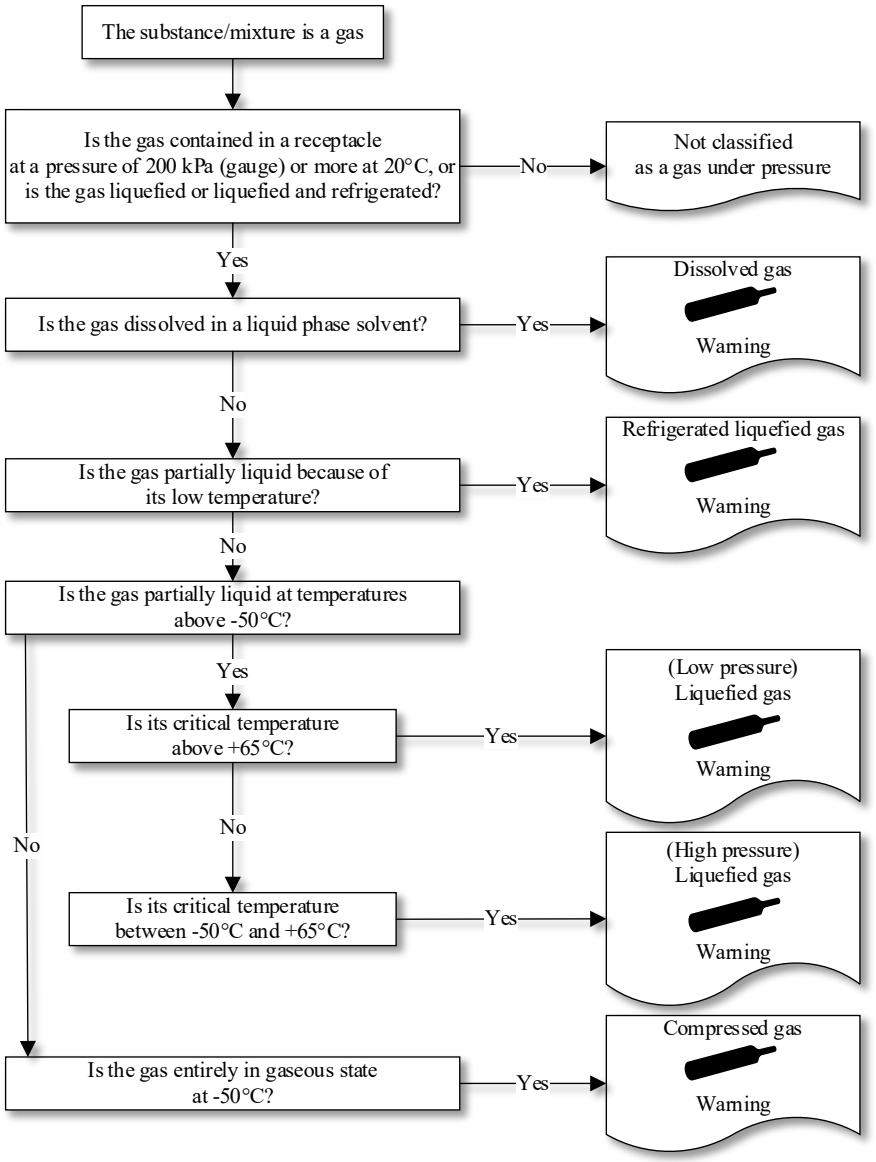


".

Chapter 2.5

2.5.4.1 Replace decision logic 2.5 with the following:

"***Decision logic 2.5 for gases under pressure***

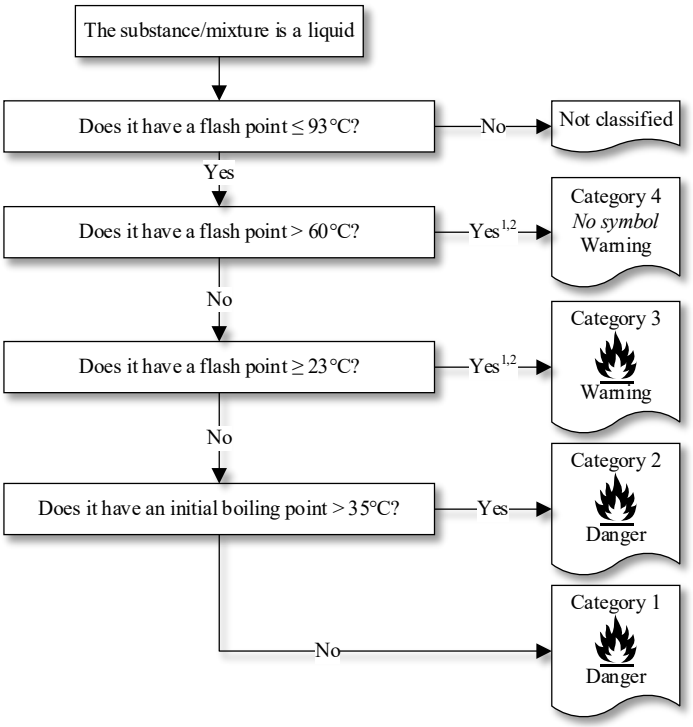


".

Chapter 2.6

2.6.4.1 Replace decision logic 2.6 with the following *(the text of the footnotes remains unchanged)*:

"Decision logic 2.6 for flammable liquids

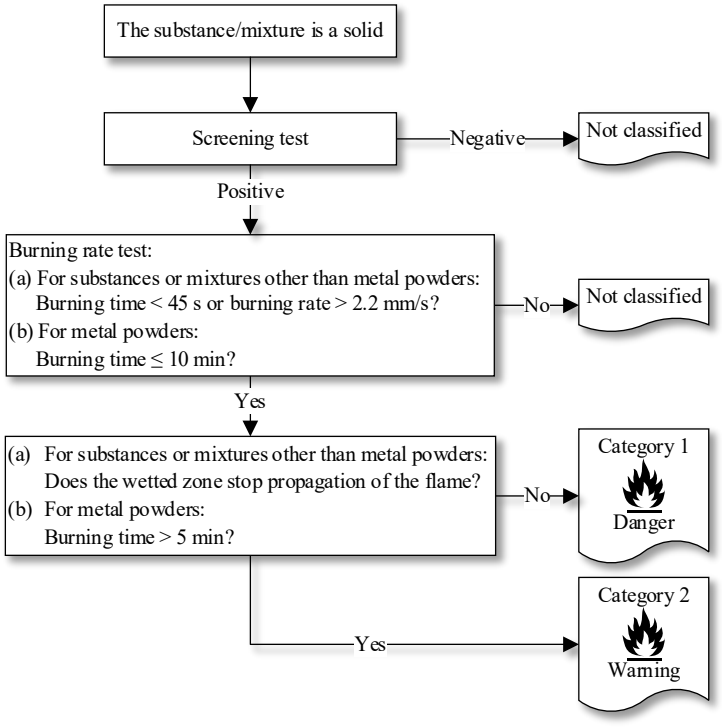


".

Chapter 2.7

2.7.4 Replace decision logic 2.7 with the following:

"*Decision logic 2.7 for flammable solids*

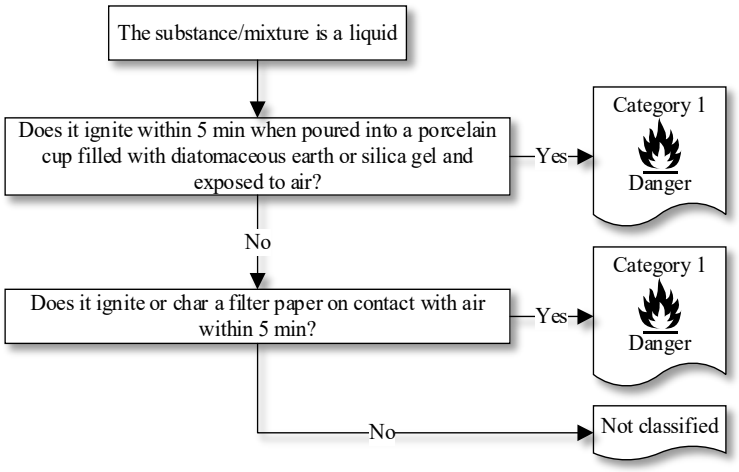


".

Chapter 2.9

2.9.4.1 Replace decision logic 2.9 with the following:

"Decision logic 2.9 for pyrophoric liquids

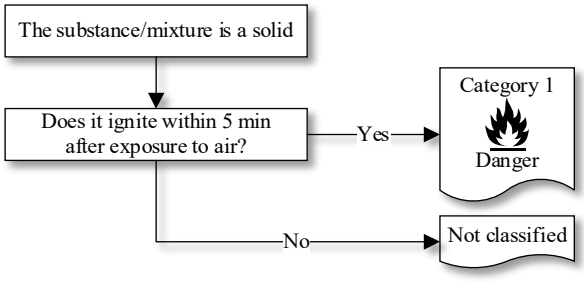


".

Chapter 2.10

2.10.4.1 Replace decision logic 2.10 with the following:

"*Decision logic 2.10 for pyrophoric solids*

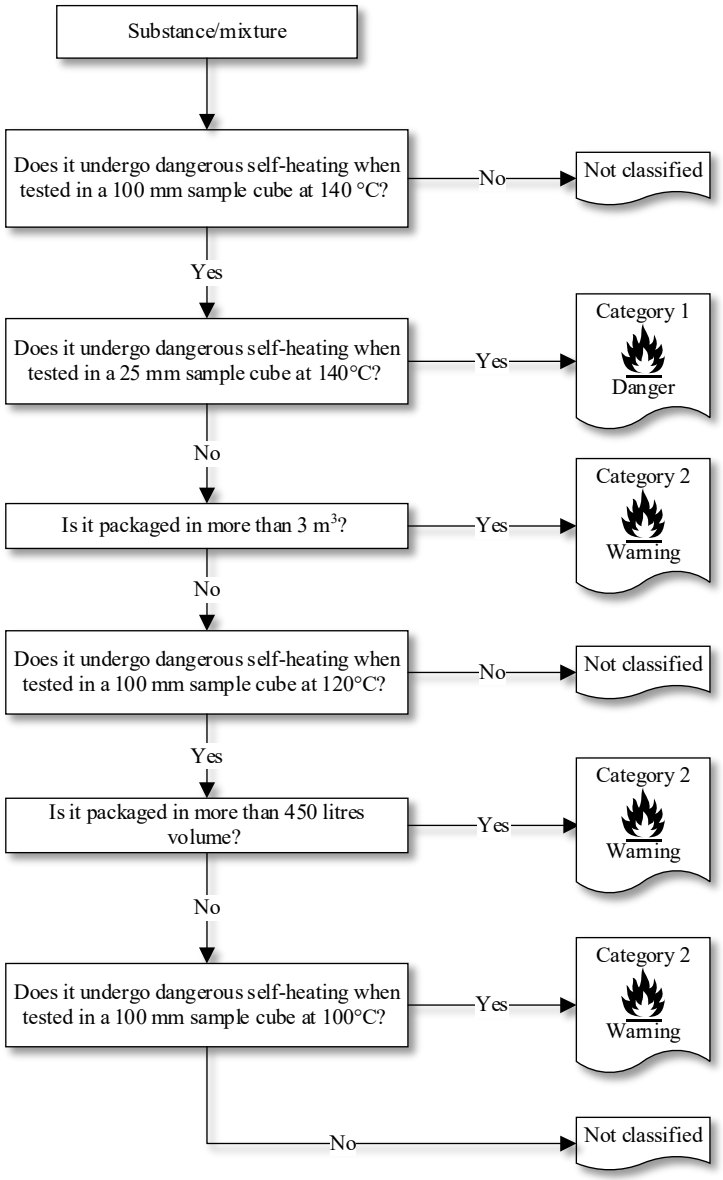


".

Chapter 2.11

2.11.4.1 Replace decision logic 2.11 with the following:

"***Decision logic 2.11 for self-heating substances and mixtures***

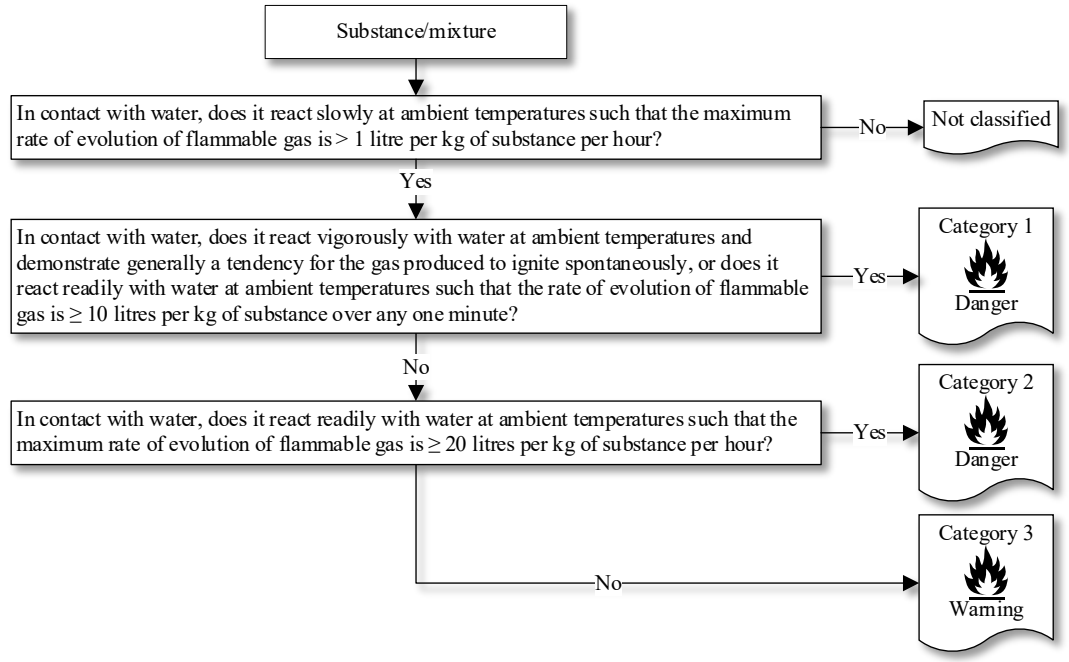


".

Chapter 2.12

2.12.4.1 Replace decision logic 2.12 with the following:

"Decision logic 2.12 for substances and mixtures which, in contact with water, emit flammable gases

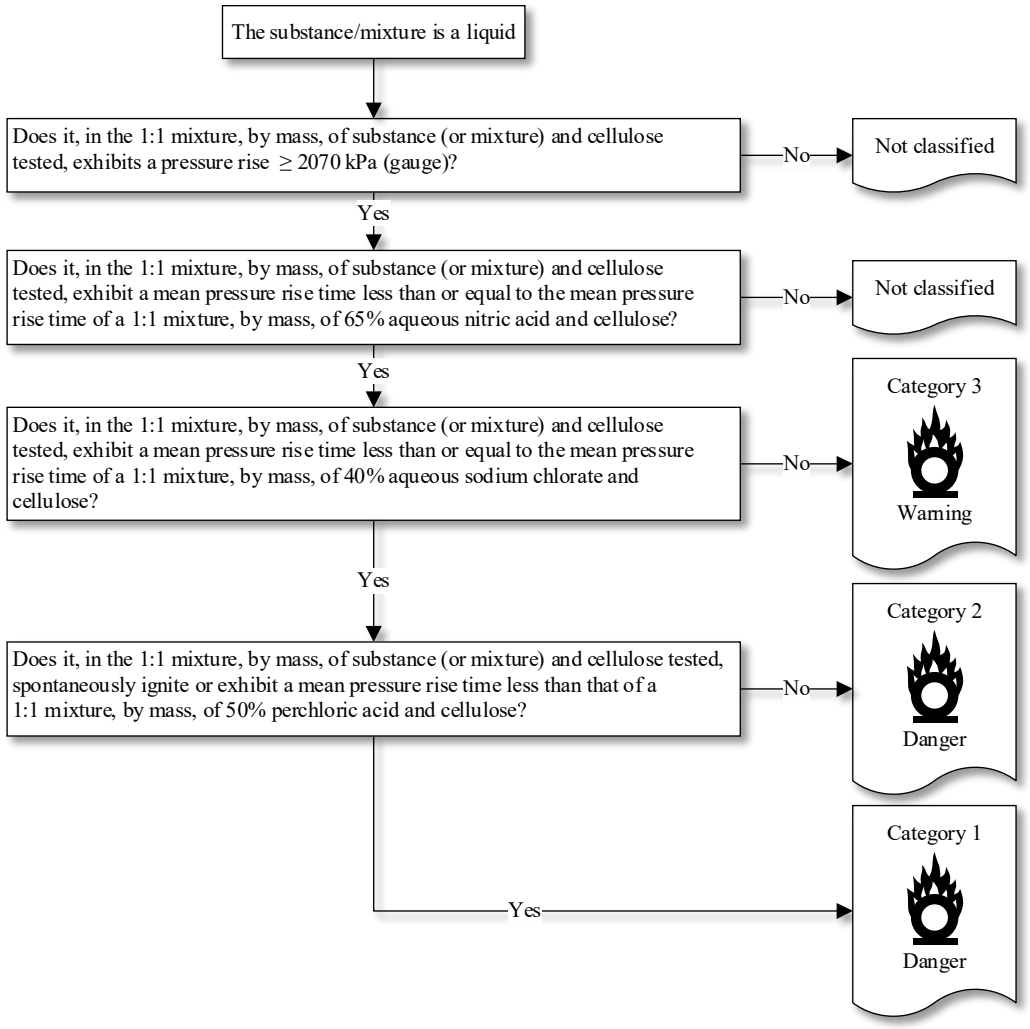


".

Chapter 2.13

2.13.4.1 Replace decision logic 2.13 with the following:

"Decision logic 2.13 for oxidizing liquids

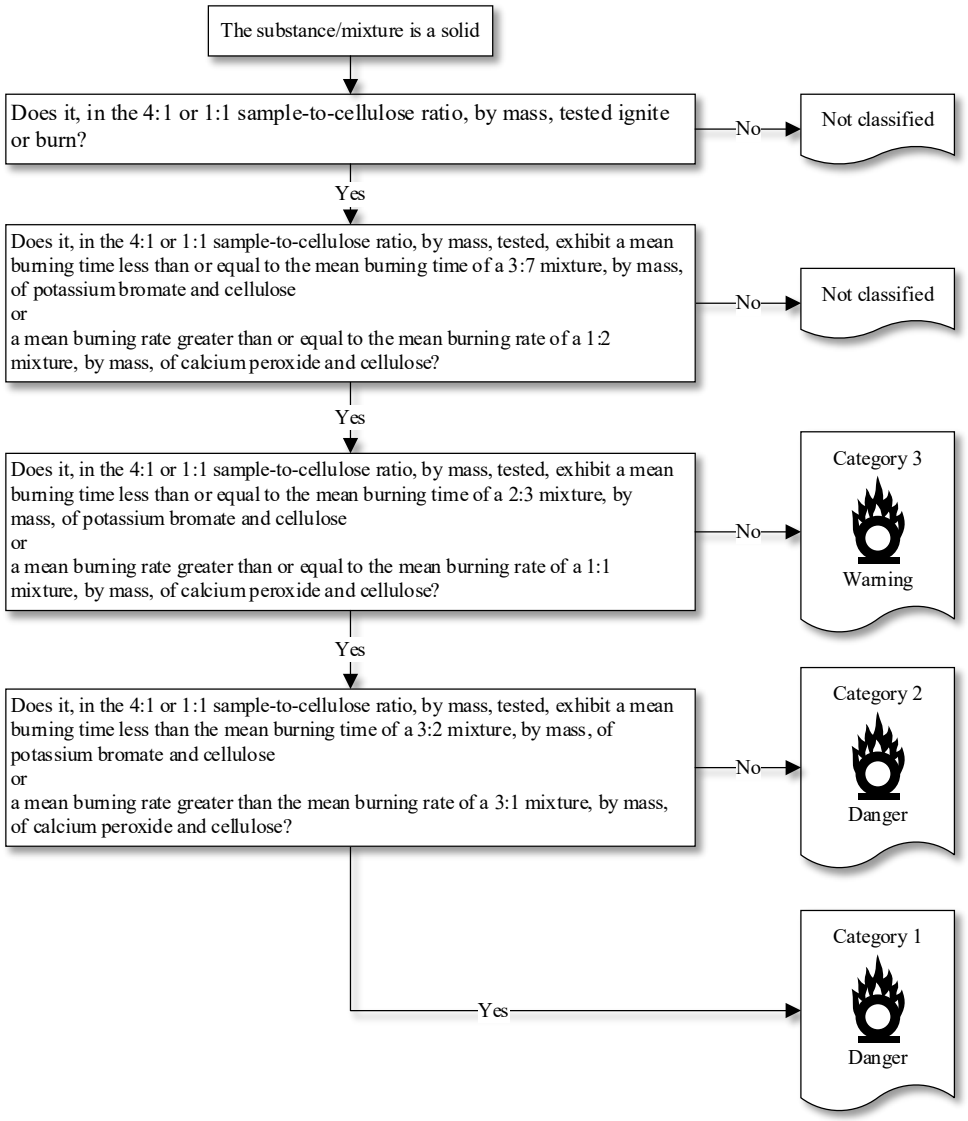


".

Chapter 2.14

2.14.4.1 Replace decision logic 2.14 with the following:

"Decision logic 2.14 for oxidizing solids

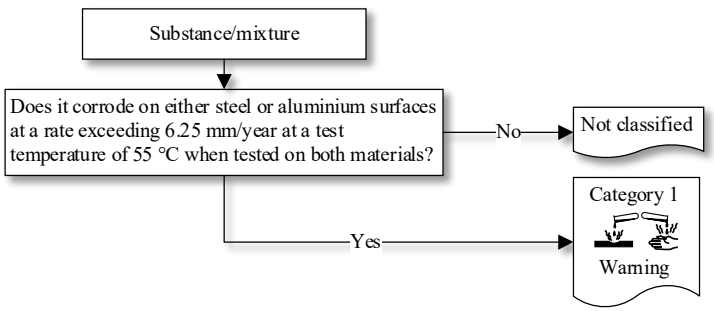


".

Chapter 2.16

2.16.14.1 Replace decision logic 2.16 with the following:

"*Decision logic 2.16 for substances and mixtures corrosive to metals*

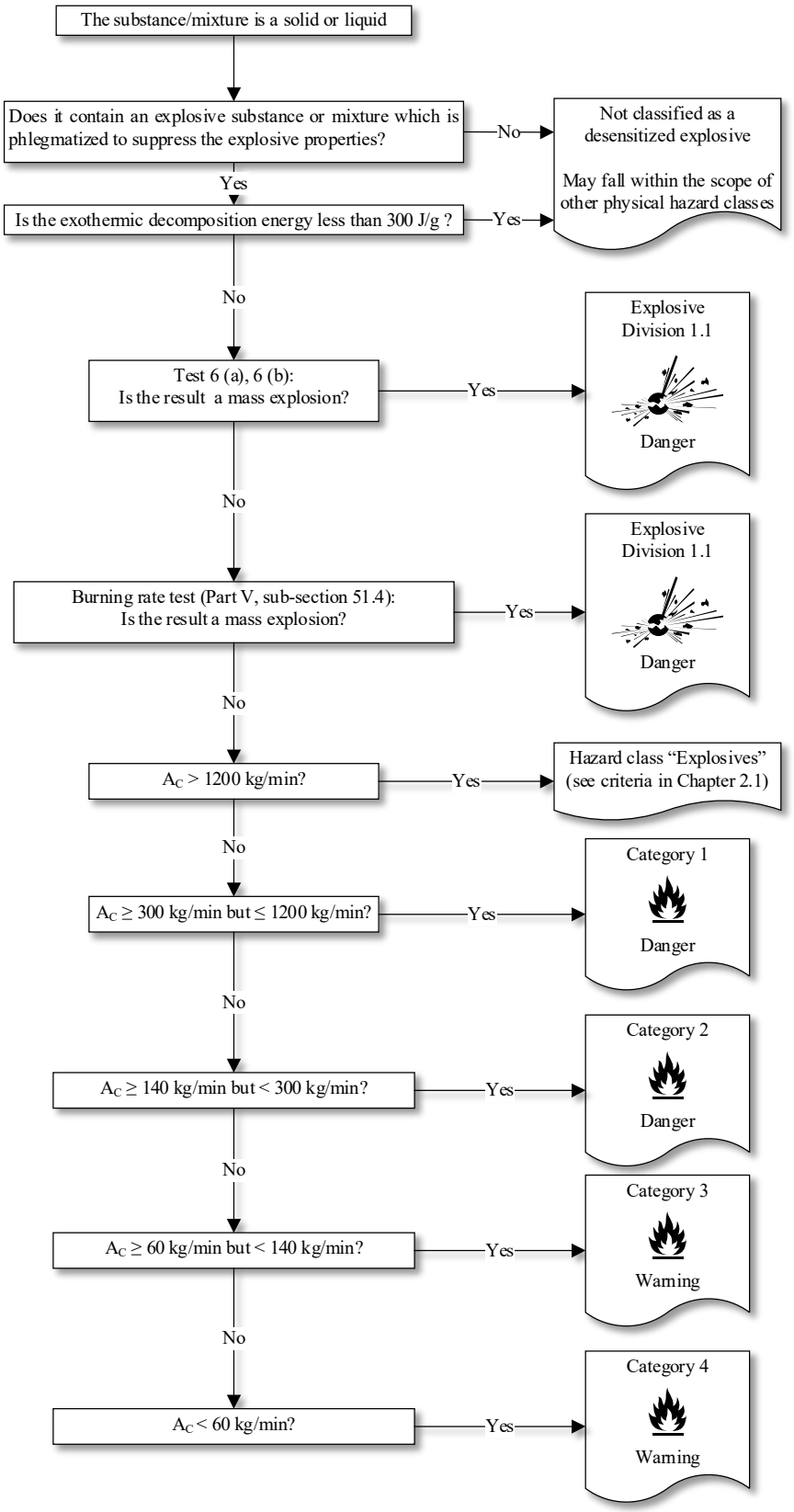


".

Chapter 2.17

2.17.14.1 Replace decision logic 2.17.1 with the following:

"Decision logic 2.17 for desensitized explosives

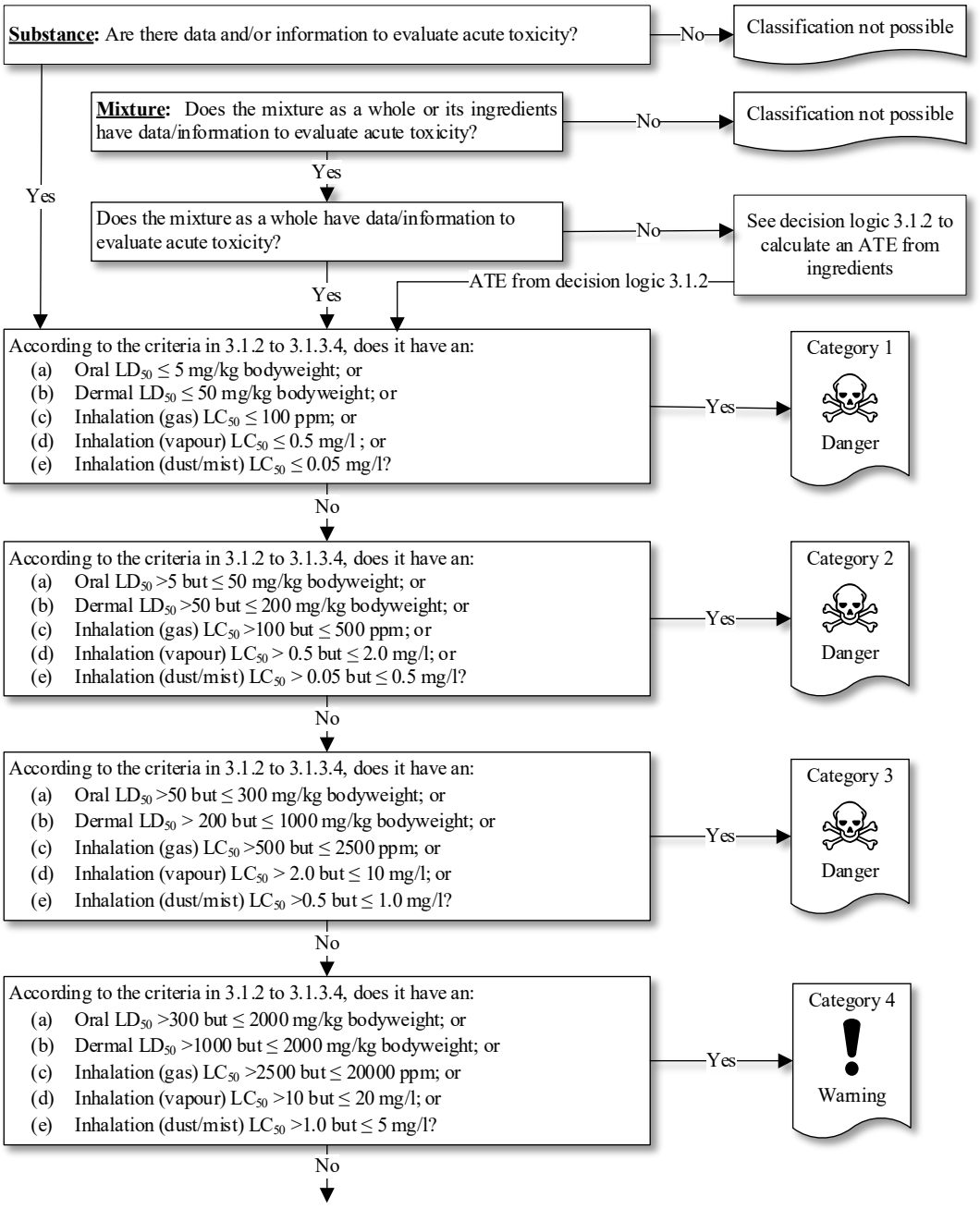


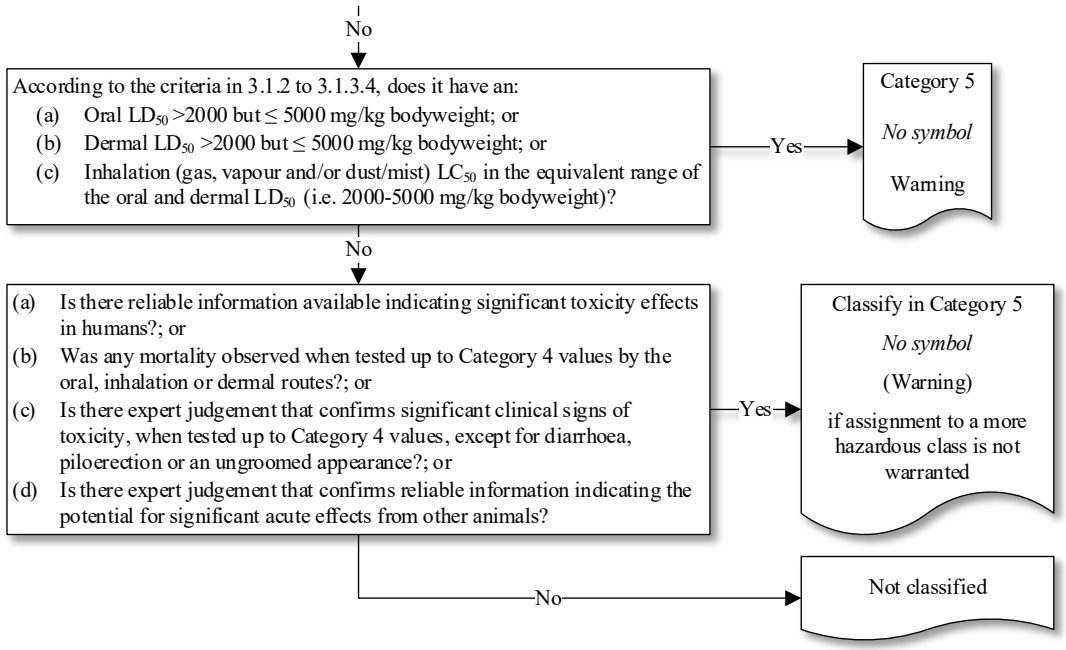
".

Chapter 3.1

3.1.5.1 Replace decision logic 3.1.1 with the following:

“

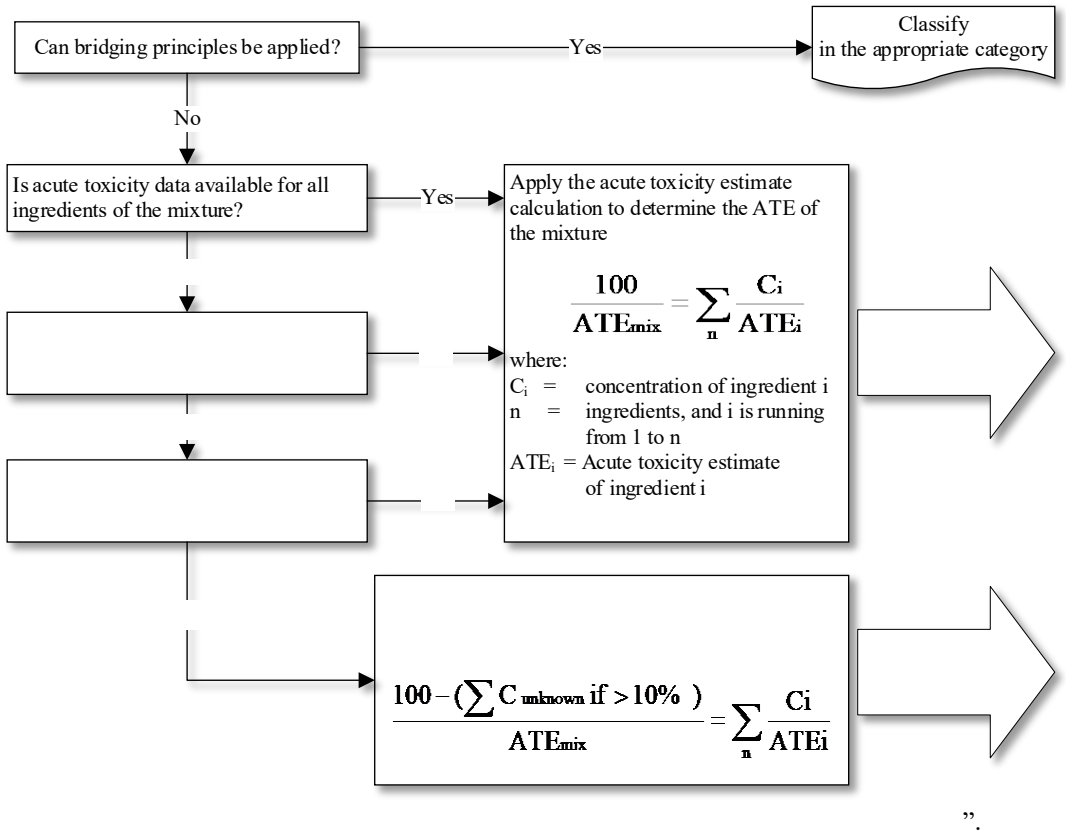




”.

3.1.5.2 Replace decision logic 3.1.2 with the following *(the text of the footnote remains unchanged)*:

“



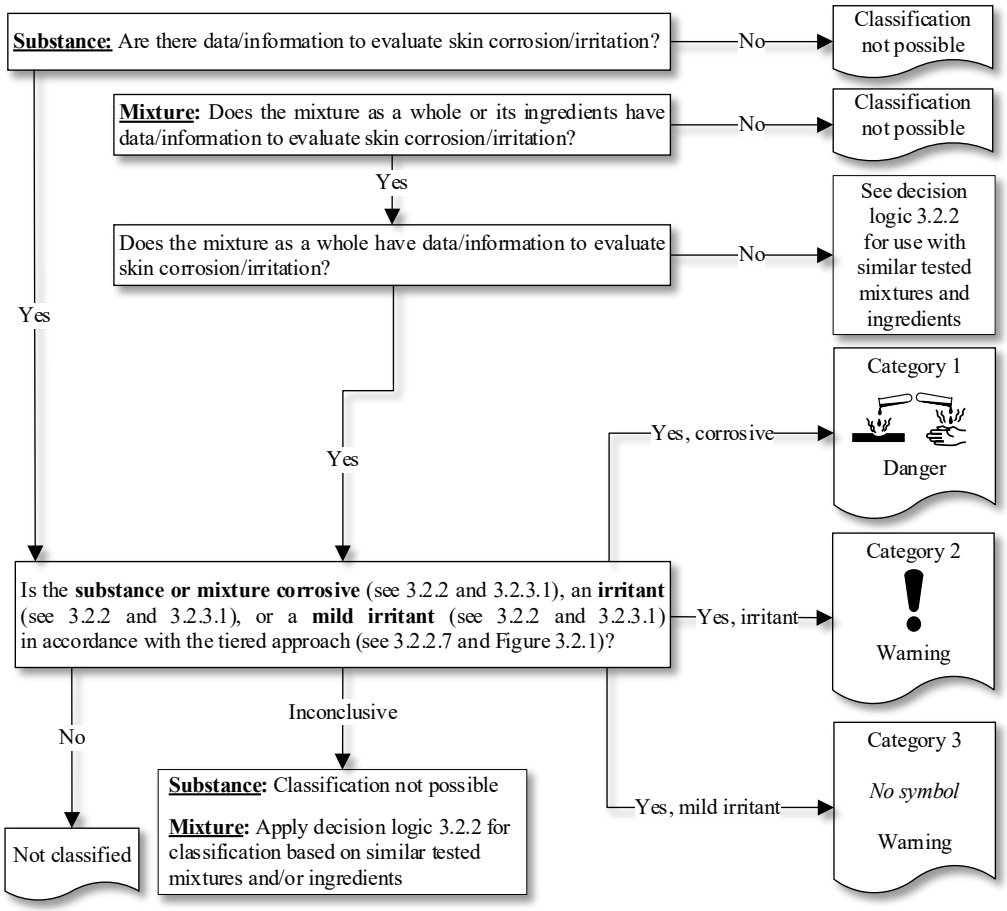
”.

Chapter 3.2

3.2.2.2.2.5 In table 3.2.2, under “Criteria”, replace “(1)”, “(2)” and “(3)” with “(a)”, “(b)” and “(c)”.

3.2.5.1 Replace decision logic 3.2.1 with the following:

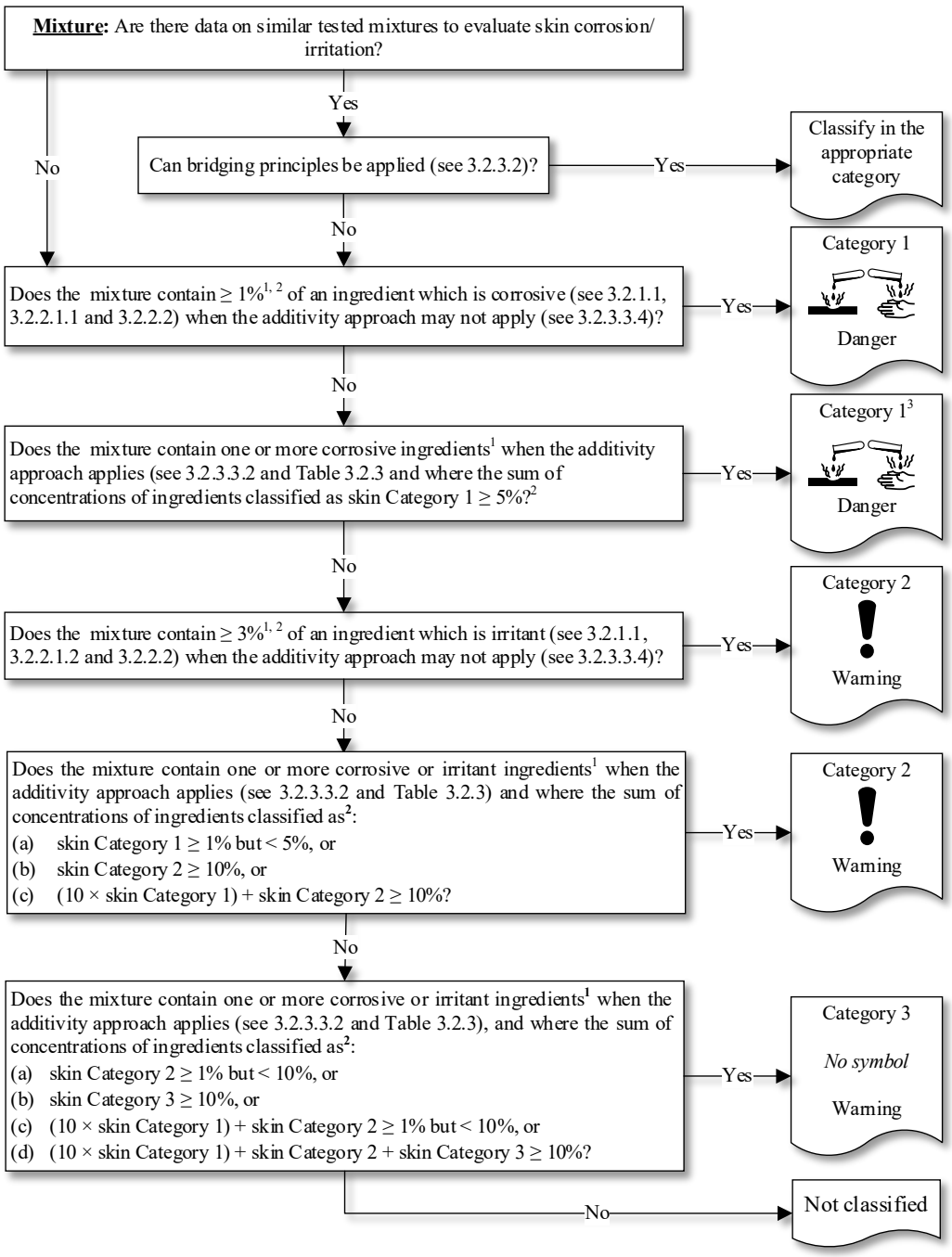
“



”.

3.2.5.2 Replace decision logic 3.2.2 with the following *(the related footnotes remain unchanged)*:

"*Classification of mixtures on the basis of information/data on similar tested mixtures and/or ingredients*



".

3.2.5.3.4 In Table 3.2.6:

In the heading of the third column, amend the list of methods to read: "…Methods 1, 2, 3, 4 and 5".

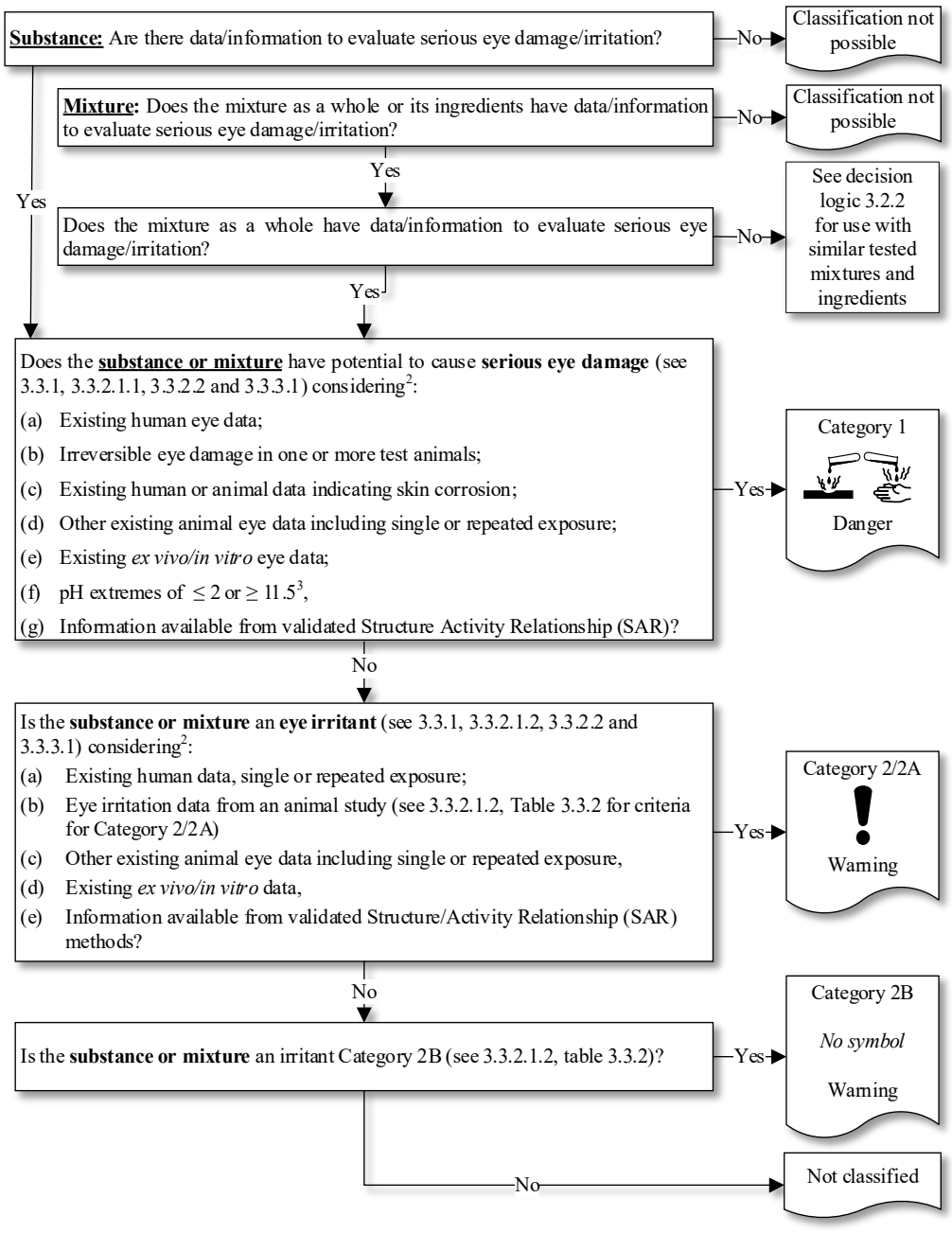
In the row for category 1, on the third cell of the table, replace "3 and 4" with "3, 4 and 5" in the list of methods before "< 50 %".

In the row for category 1A, on the fifth cell of the table, replace "Method 4" with "methods 4 and 5" in the list of methods before "< 15 %".

Chapter 3.3

3.3.5.1 Replace decision logic 3.3.1 with the following *(the text of the footnotes remains unchanged)*:

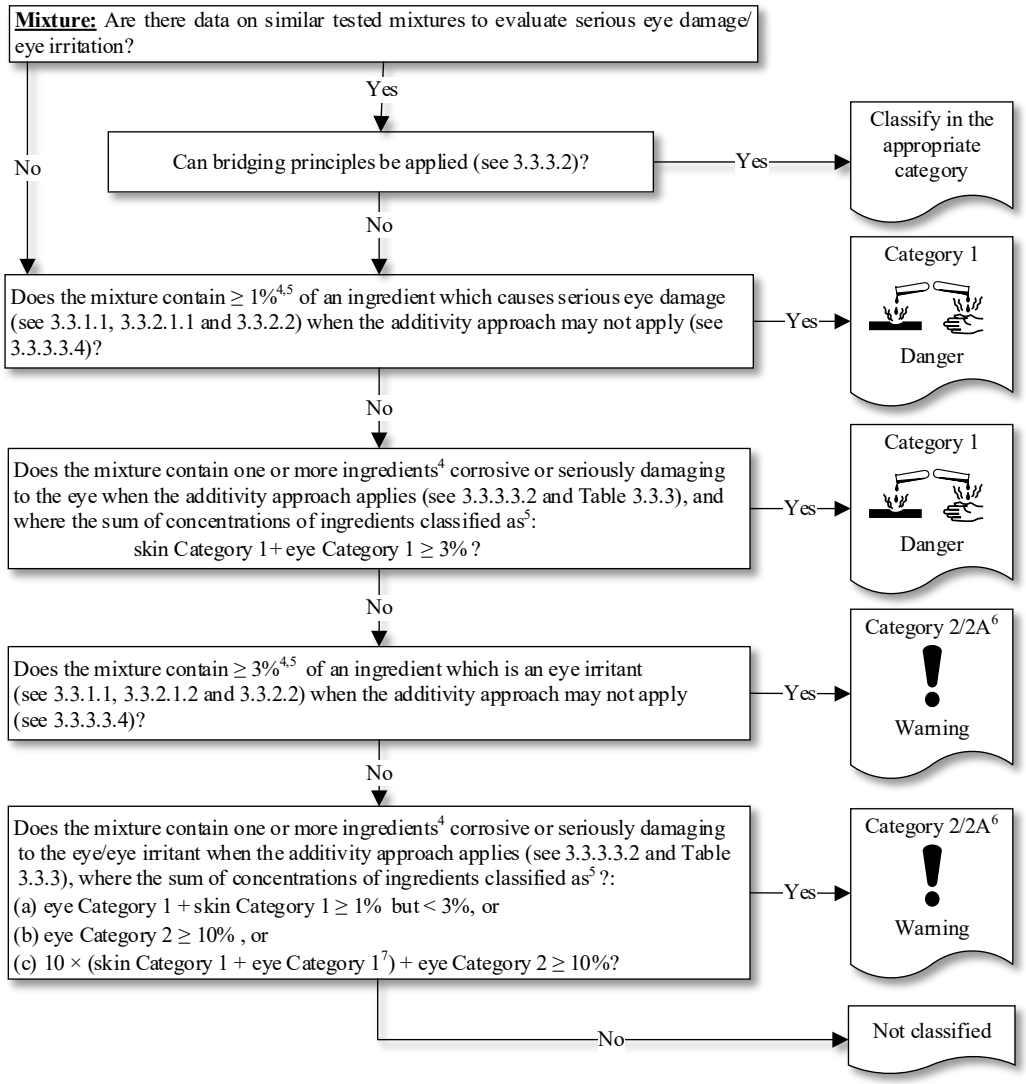
“



”.

3.3.5.2 Replace decision logic 3.3.2 with the following *(the text of the footnotes remains unchanged)*:

"*Classification of mixtures on the basis of information/data on similar tested mixtures and ingredients*

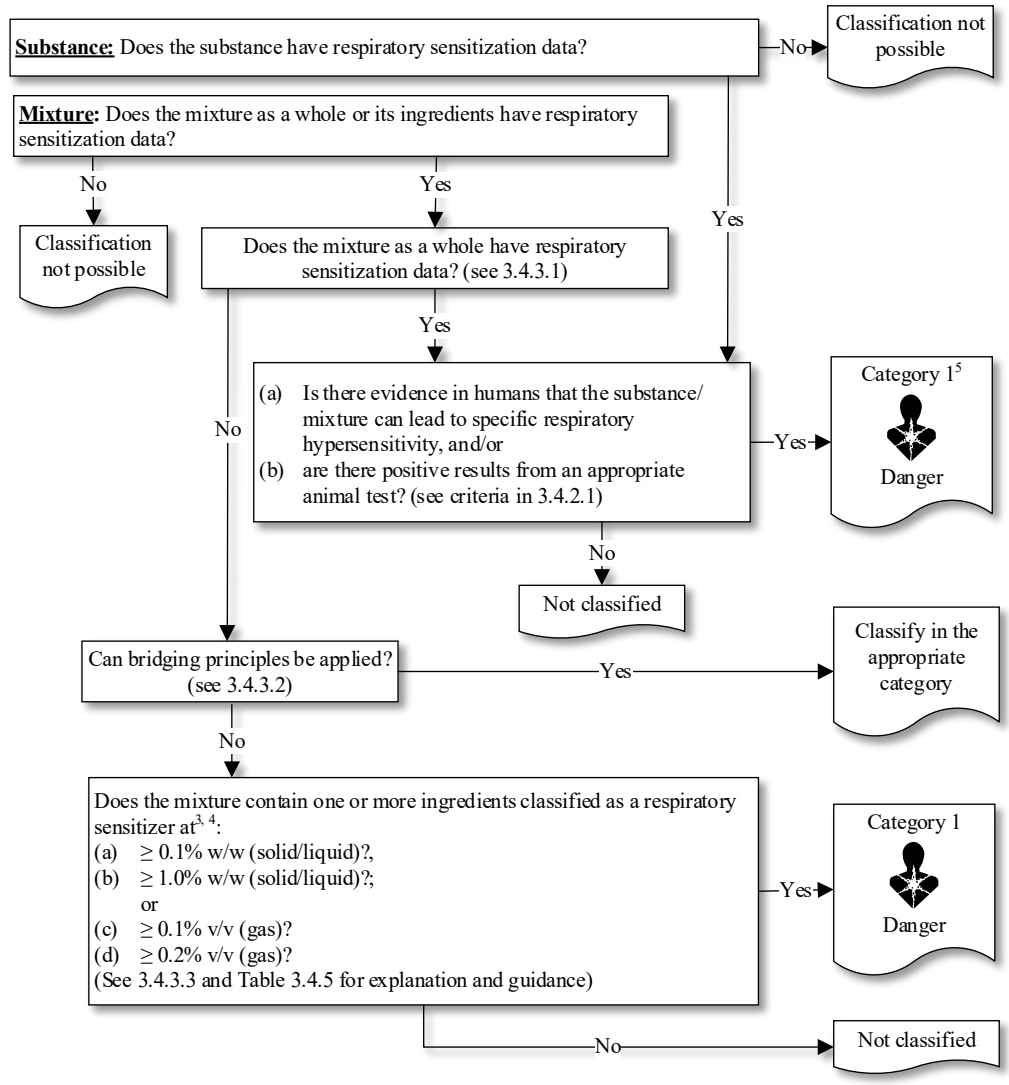


".

Chapter 3.4

3.4.5.1 Replace decision logic 3.4.1 with the following *(the text of the footnotes remains unchanged):*

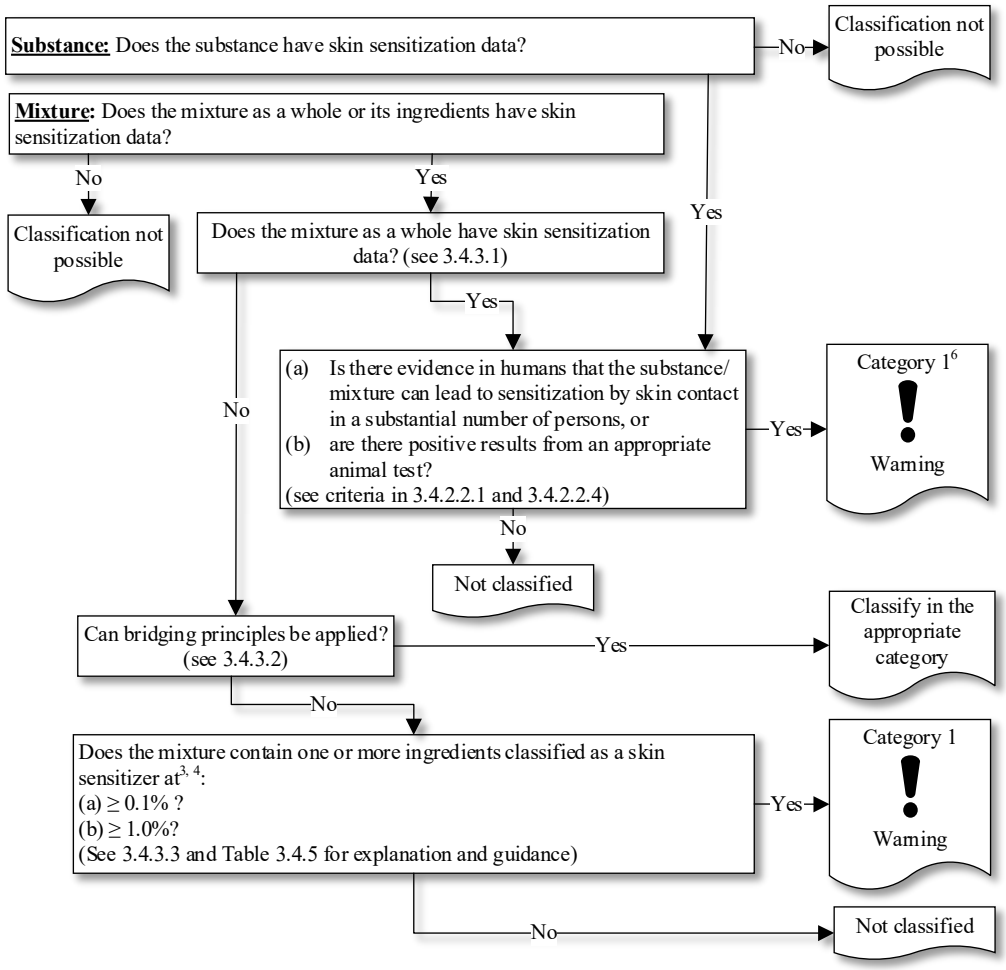
“



”.

3.4.5.2 Replace decision logic 3.4.2 with the following *(the text of the footnotes remains unchanged)*:

“



”.

Chapter 3.5

3.5.2.7 (a) At the end of the current list, add: “Transgenic Rodent Somatic and Germ Cell Gene Mutation Assays (OECD 488)”.

3.5.2.8 Insert the following references after the introductory sentence, before the current examples (“Liver…”):

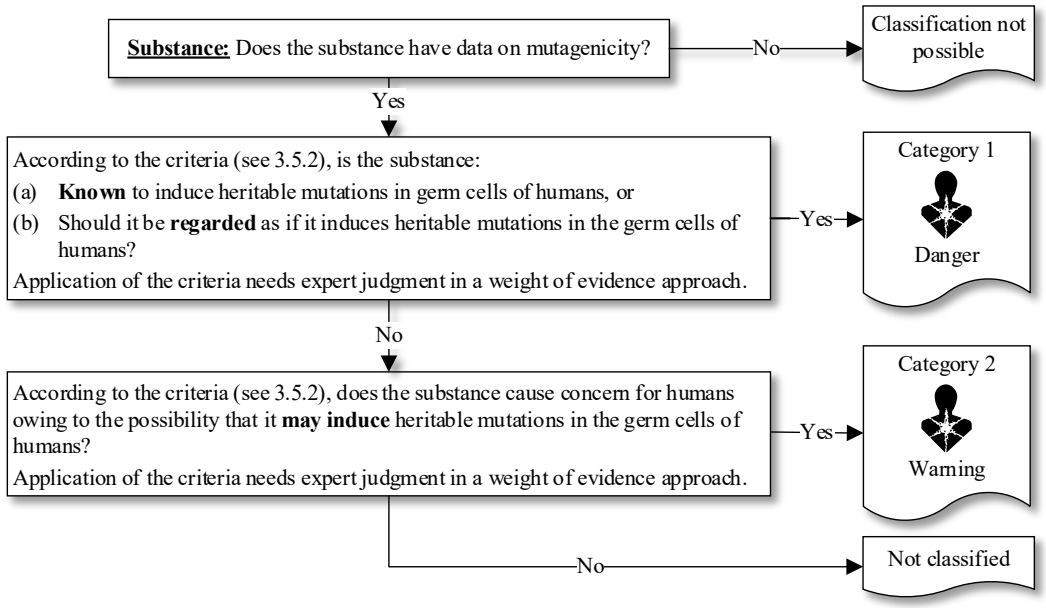
“In vivo Mammalian Alkaline Comet Assay (OECD 489)

Transgenic Rodent Somatic and Germ Cell Gene Mutation Assays (OECD 488)”

3.5.2.9 Amend the end of the second example to read as follows: “(OECD 476 and 490)”.

3.5.5.1.1 Replace decision logic 3.5.1 with the following:

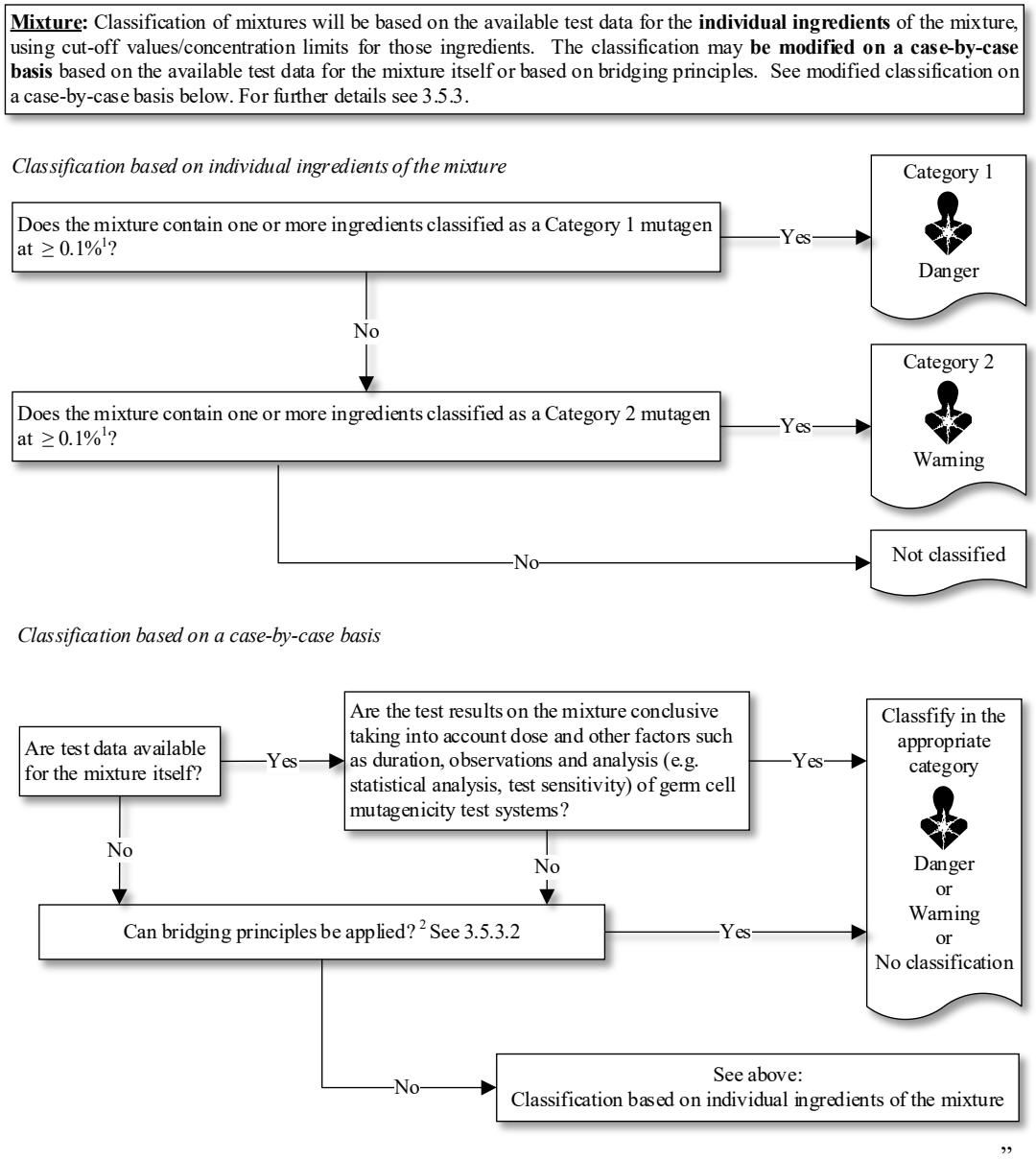
“



”.

3.5.5.1.2 Replace decision logic 3.5.2 with the following *(the text of the footnotes remains unchanged)*:

“

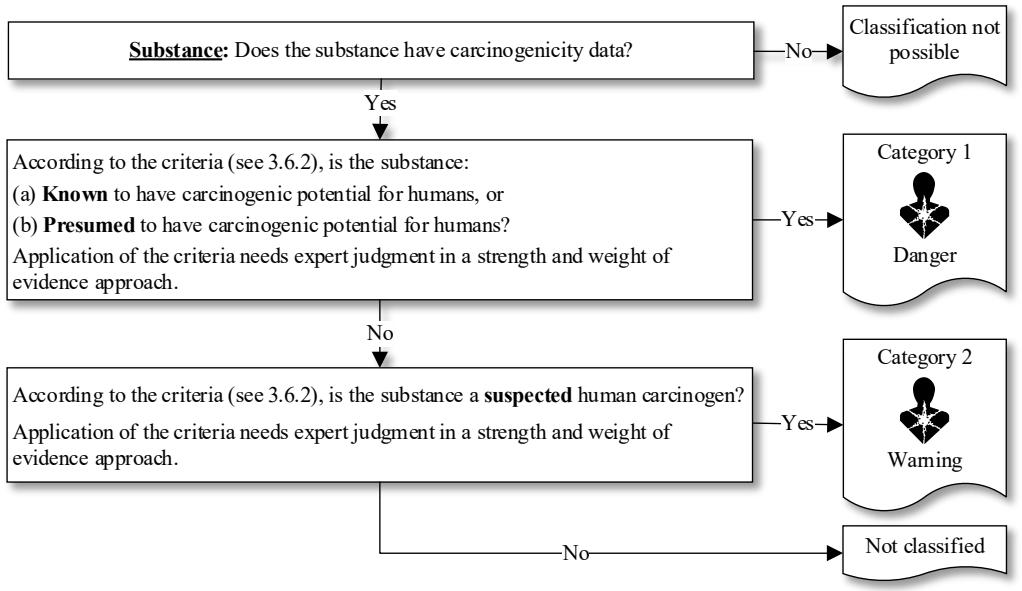


”

Chapter 3.6

3.6.5.1 Replace decision logic 3.6.1 with the following:

“



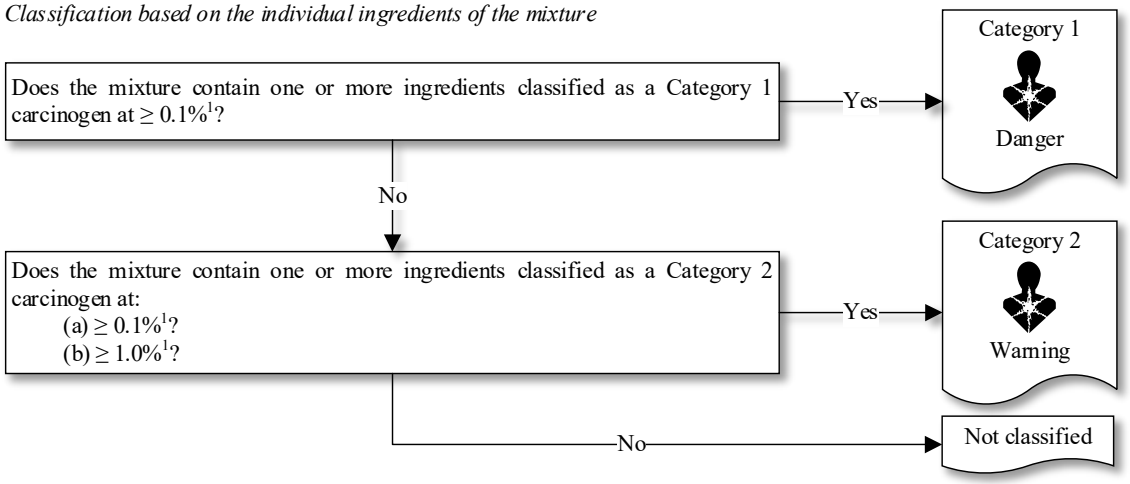
”.

3.6.5.2 Replace decision logic 3.6.2 with the following *(the text of the footnotes remains unchanged)*:

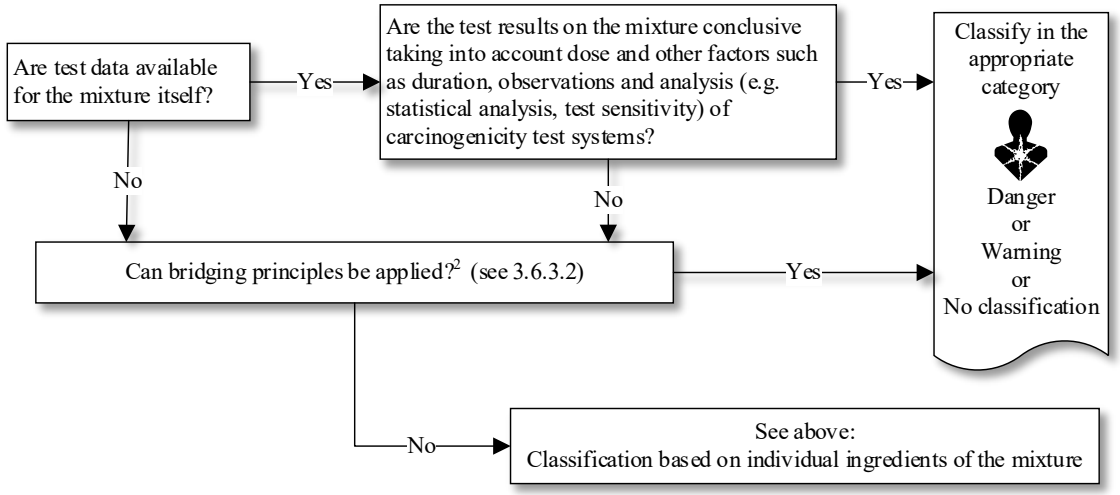
"

Mixture: Classification of mixtures will be based on the available test data for the **individual ingredients** of the mixture, using cut-off values/concentration limits for those ingredients. The classification may be **modified on a case-by-case basis** based on the available test data for the mixture as a whole or based on bridging principles. See modified classification on a case-by-case basis below. For further details see 3.6.2.7, 3.6.3.1 and 3.6.3.2.

Classification based on the individual ingredients of the mixture



Modified classification on a case-by-case basis

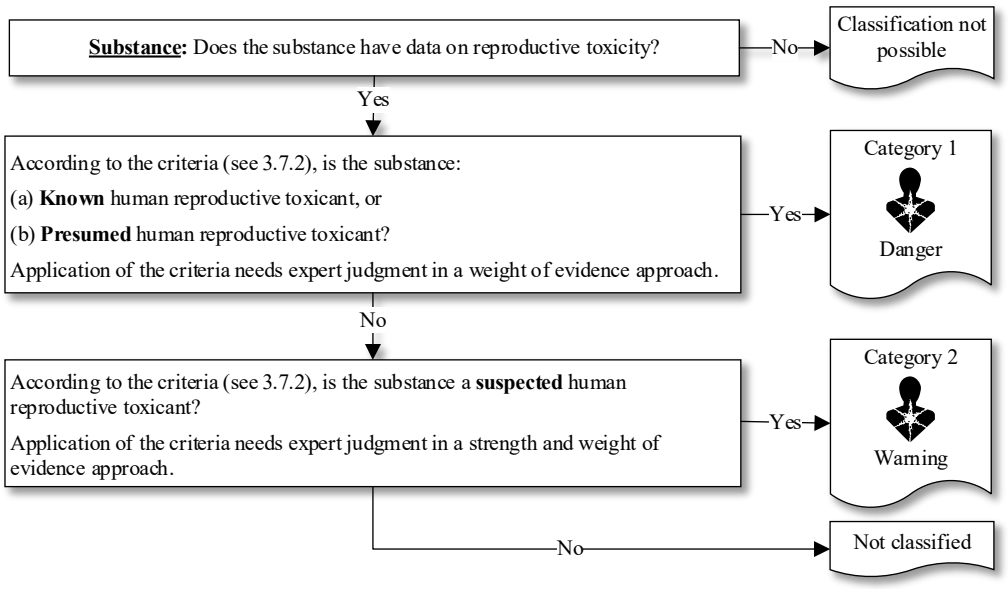


".

Chapter 3.7

3.7.5.1.1 Replace decision logic 3.7.1 with the following:

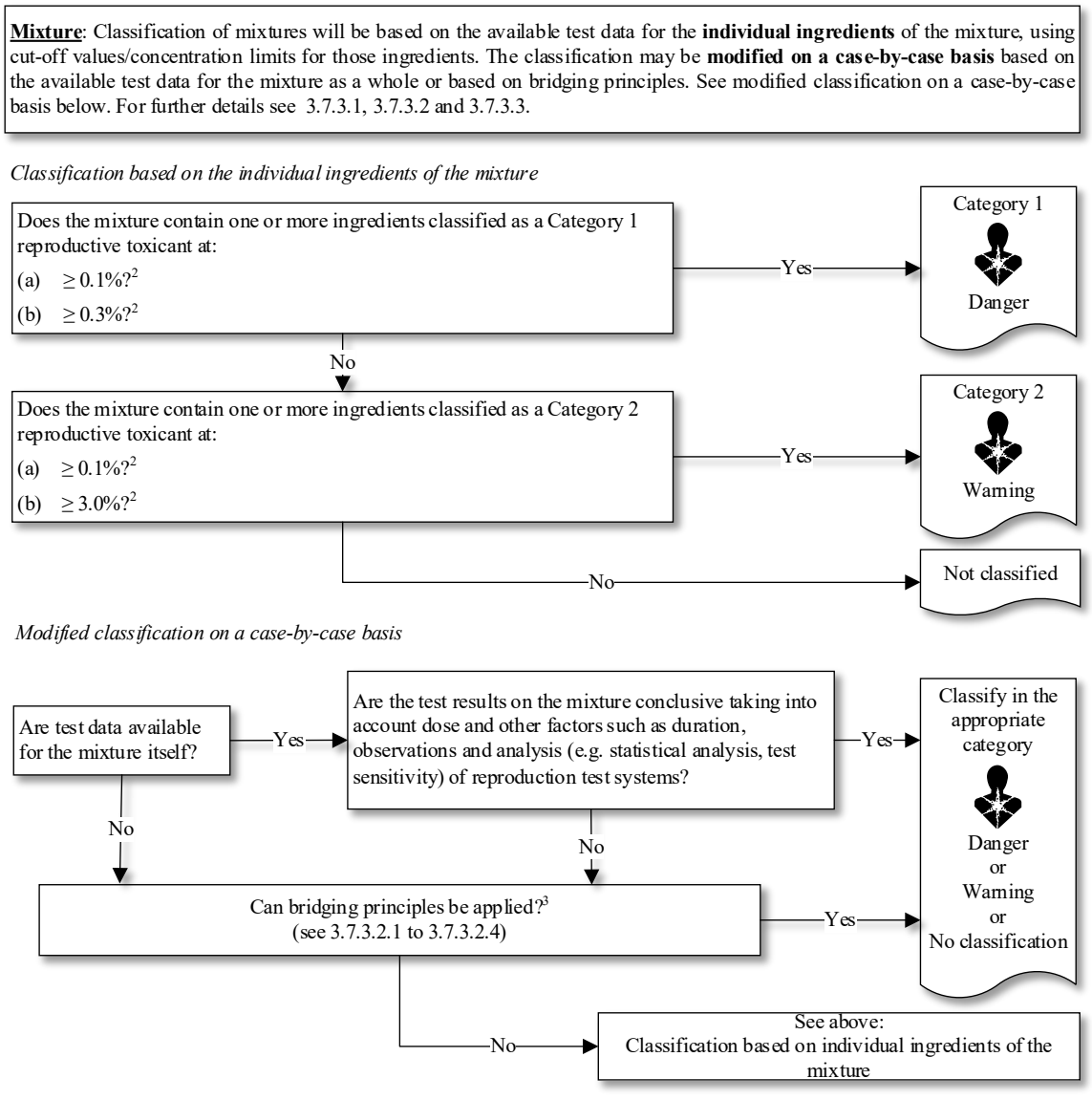
“



”.

3.7.5.1.2 Replace decision logic 3.7.2 with the following *(the text of the footnotes remains unchanged)*:

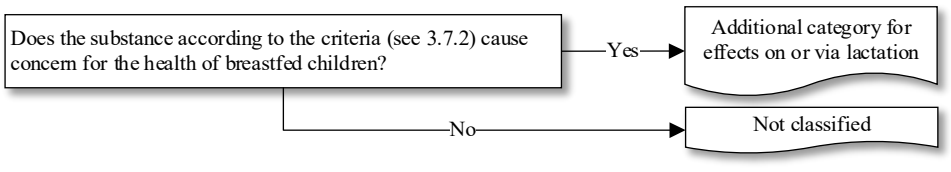
"



".

3.7.5.2.1 Replace decision logic 3.7.3 with the following:

"



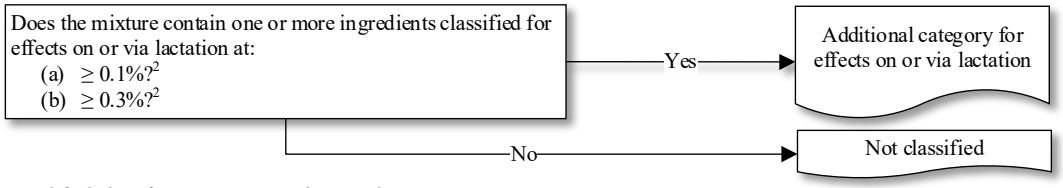
".

3.7.5.2.2 Replace decision logic 3.7.4 with the following *(the text of the footnotes remains unchanged):*

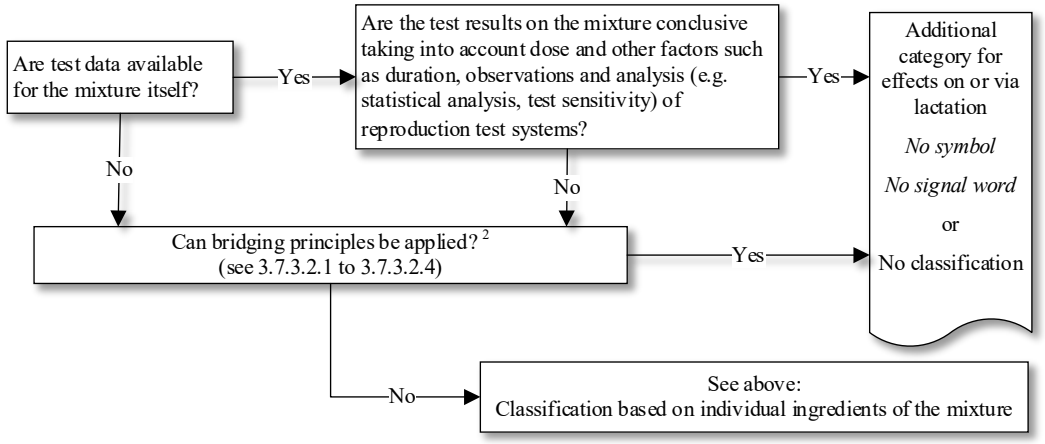
“

Mixture: Classification of mixtures will be based on the available test data for the **individual ingredients** of the mixture, using cut-off values/concentration limits for those ingredients. The classification may be **modified on a case-by-case basis** based on the available test data for the mixture as a whole or based on bridging principles. See modified classification on a case-by-case basis below. For further details see 3.7.3.1, 3.7.3.2 and 3.7.3.3.

Classification based on the individual ingredients of the mixture



Modified classification on a case-by-case basis

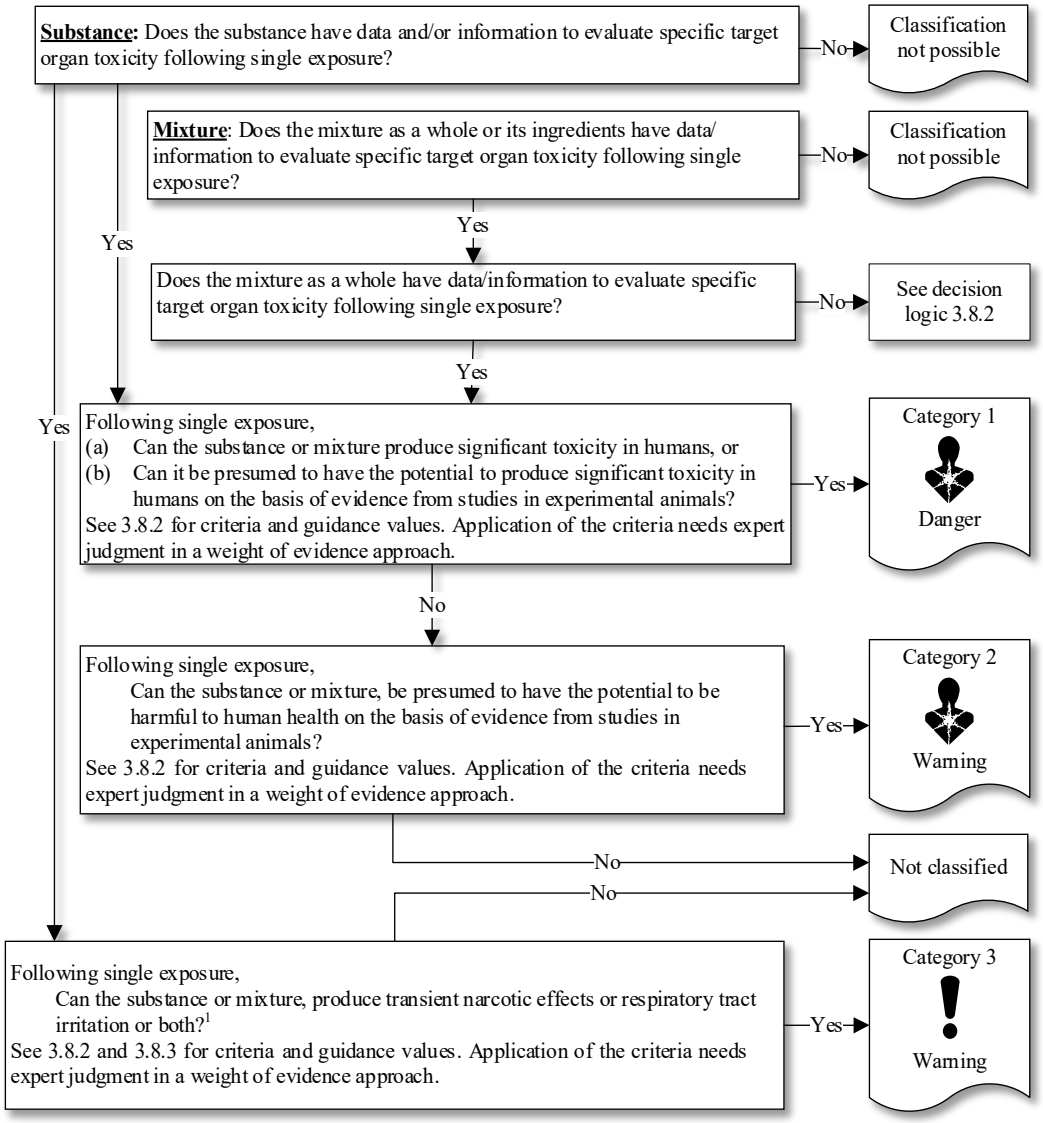


”.

Chapter 3.8

3.8.5.1 Replace decision logic 3.8.1 with the following *(the text of the footnote remains unchanged)*:

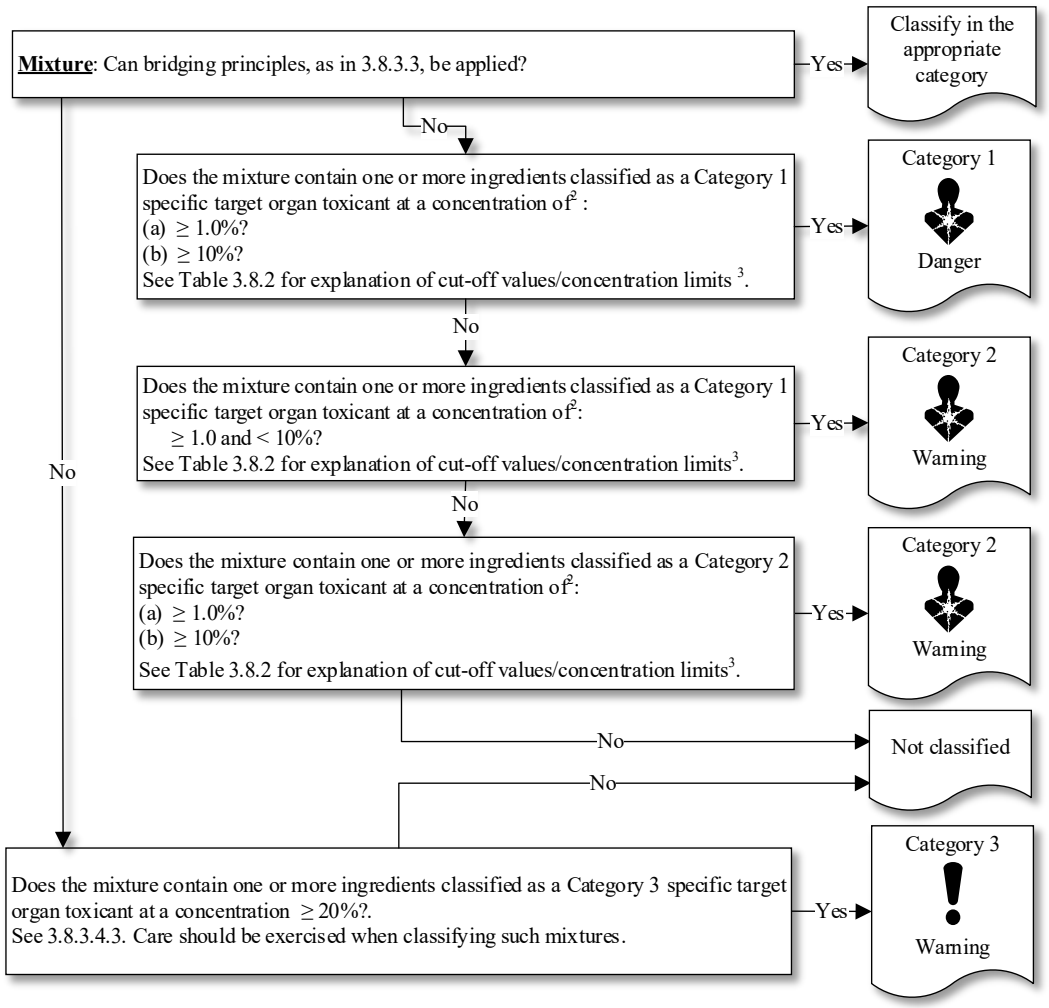
"



".

3.8.5.2 Replace decision logic 3.8.2 with the following *(the text of the footnotes remains unchanged):*

"

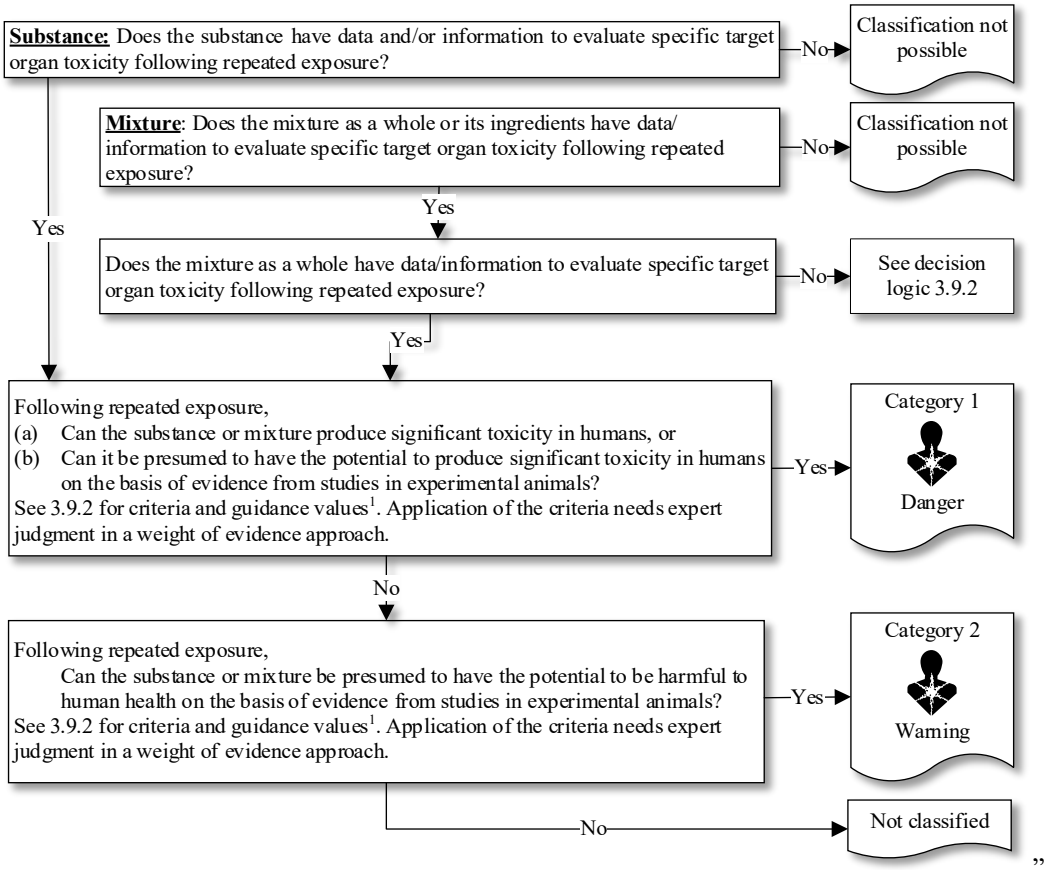


".

Chapter 3.9

3.9.5.1 Replace decision logic 3.9.1 with the following *(the text of the footnote remains unchanged)*:

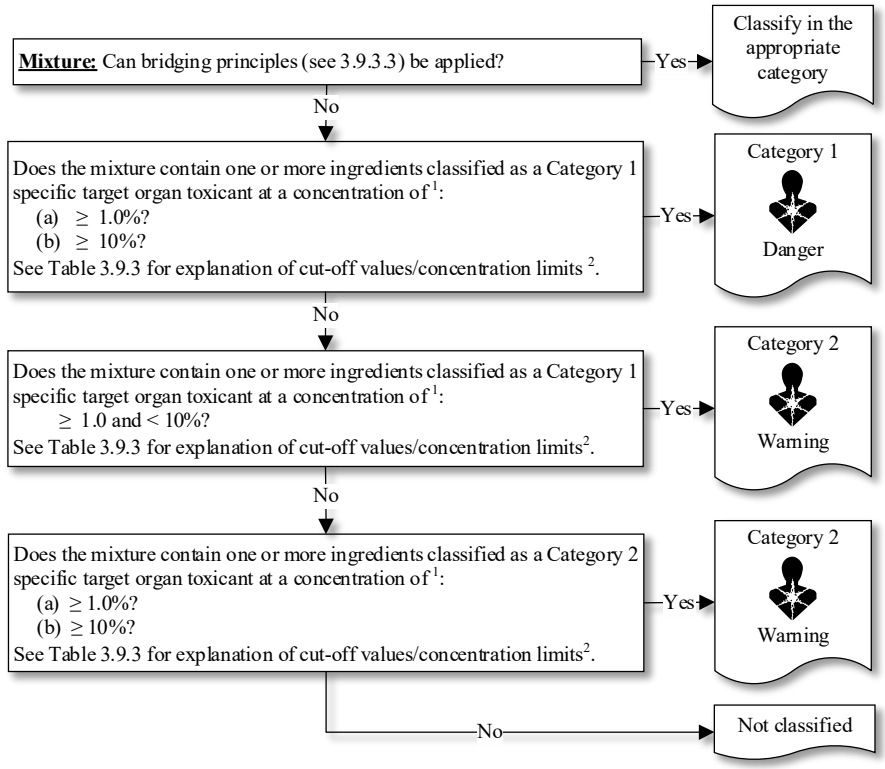
“



”

3.9.5.2 Replace decision logic 3.9.2 with the following *(the text of the footnotes remains unchanged)*:

"

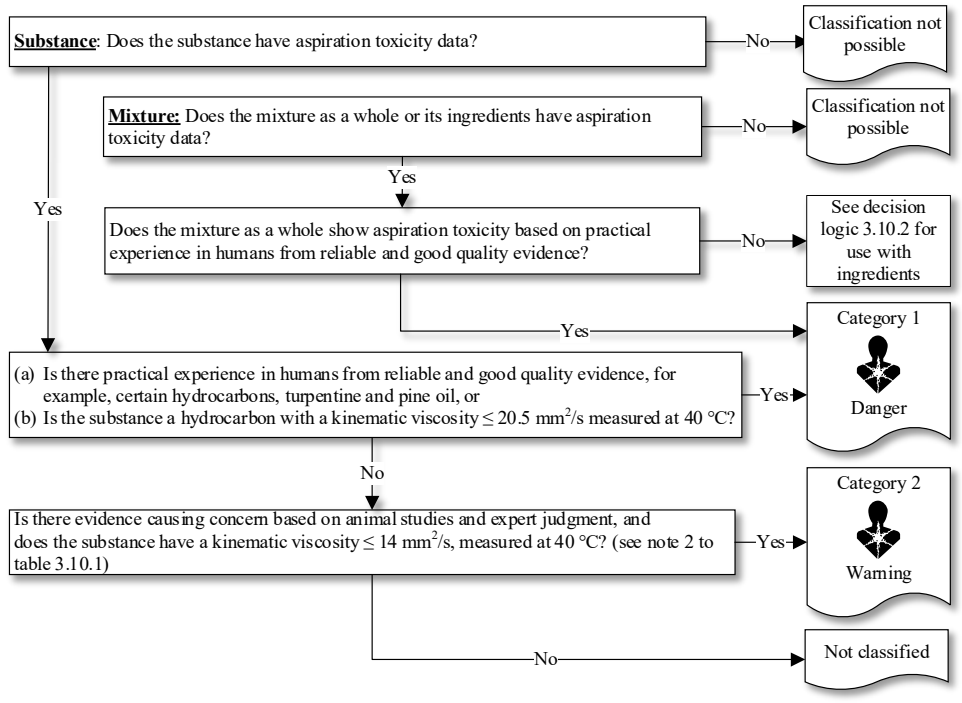


".

Chapter 3.10

3.10.5.1 Replace decision logic 3.10.1 with the following:

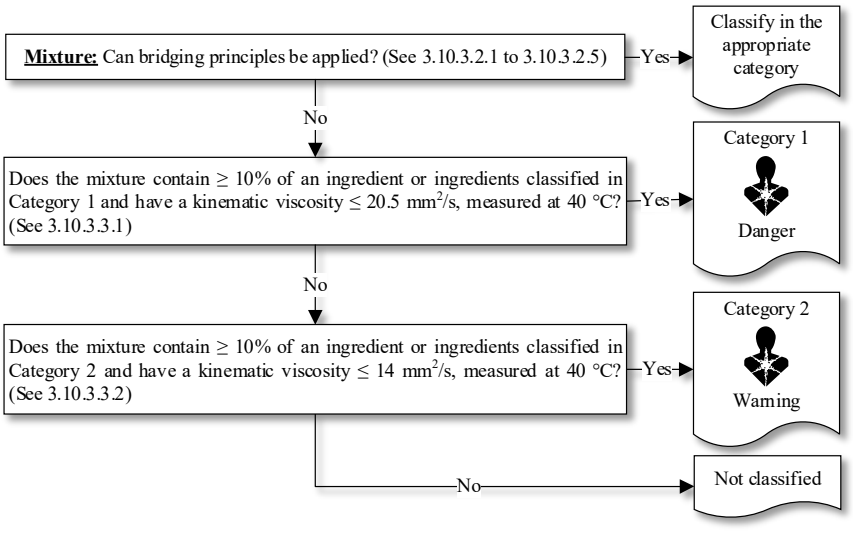
"



".

3.10.5.2 Replace decision logic 3.10.2 with the following:

“



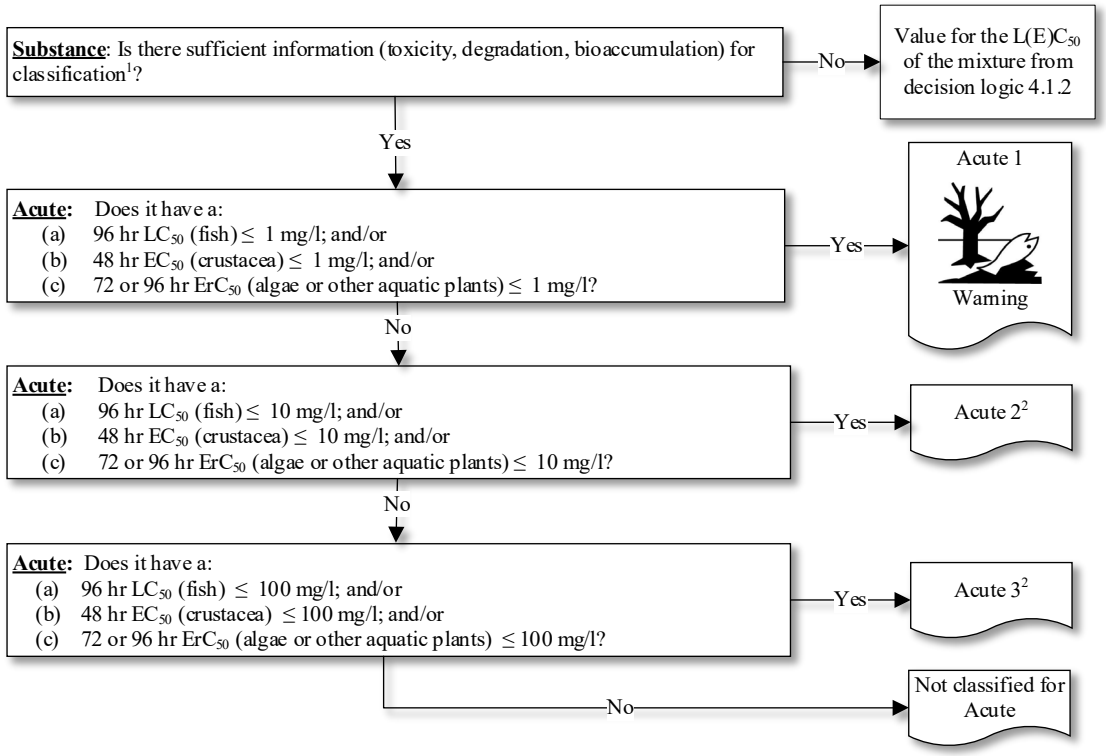
”.

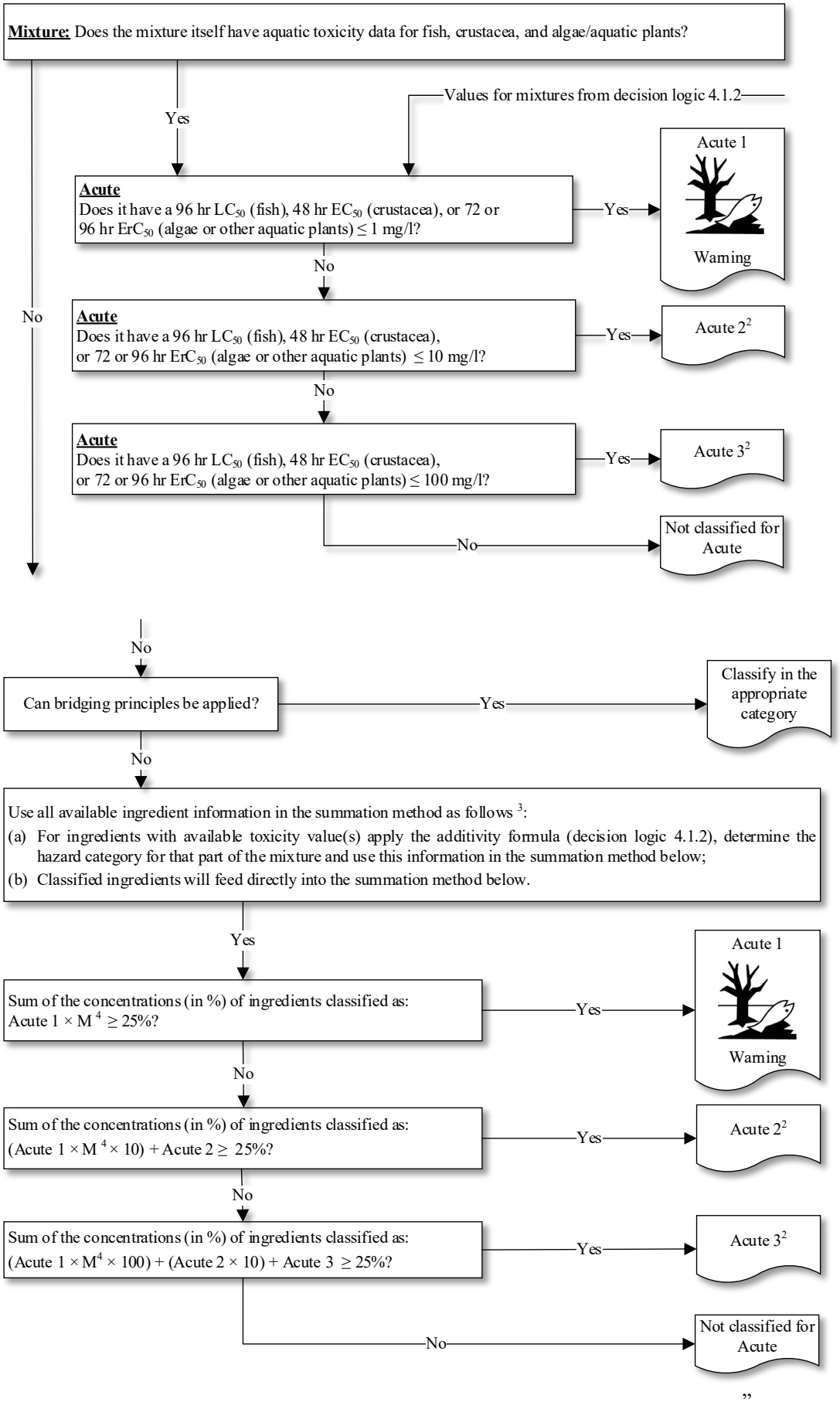
Chapter 4.1

4.1.3.3.4 (a) (ii) Replace “as Chronic 1, 2 or 3” by “as Chronic 1 or 2”.

4.1.5.1.1 Replace decision logic 4.1.1. with the following *(the text of the footnotes remains unchanged)*:

“

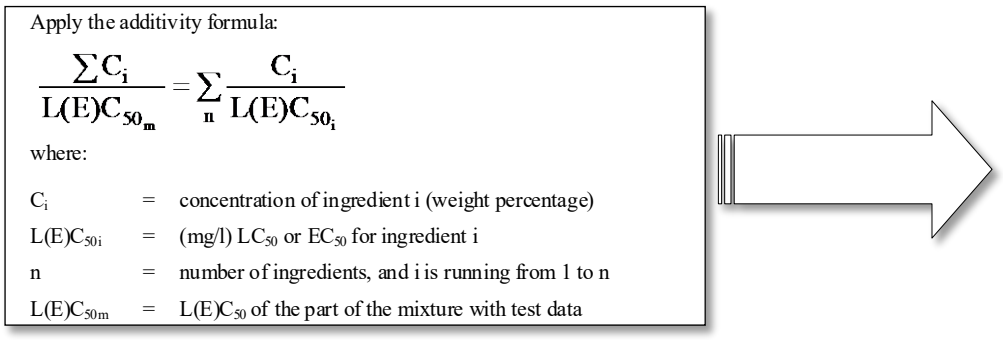



Mixture: Does the mixture itself have aquatic toxicity data for fish, crustacea, and algae/aquatic plants?
Yes
No
Values for mixtures from decision logic 4.1.2
Acute
Does it have a 96 hr LC50 (fish), 48 hr EC50 (crustacea), or 72 or 96 hr ErC50 (algae or other aquatic plants) ≤ 1 mg/l?
Yes
Acute 1
Warning
No
Acute
Does it have a 96 hr LC50 (fish), 48 hr EC50 (crustacea), or 72 or 96 hr ErC50 (algae or other aquatic plants) ≤ 10 mg/l?
Yes
Acute 2[2]
No
Acute
Does it have a 96 hr LC50 (fish), 48 hr EC50 (crustacea), or 72 or 96 hr ErC50 (algae or other aquatic plants) ≤ 100 mg/l?
Yes
Acute 3[2]
No
Not classified for Acute
No
Can bridging principles be applied?
Yes
Classify in the appropriate category
No
Use all available ingredient information in the summation method as follows [3]:
(a) For ingredients with available toxicity value(s) apply the additivity formula (decision logic 4.1.2), determine the hazard category for that part of the mixture and use this information in the summation method below;
(b) Classified ingredients will feed directly into the summation method below.
Yes
Sum of the concentrations (in %) of ingredients classified as: Acute 1 × M [4] ≥ 25%?
Yes
Acute 1
Warning
No
Sum of the concentrations (in %) of ingredients classified as: (Acute 1 × M [4] × 10) + Acute 2 ≥ 25%?
Yes
Acute 2[2]
No
Sum of the concentrations (in %) of ingredients classified as: (Acute 1 × M[4] × 100) + (Acute 2 × 10) + Acute 3 ≥ 25%?
Yes
Acute 3[2]
No
Not classified for Acute

”.

4.1.5.1.2 Replace decision logic 4.1.2 with the following:

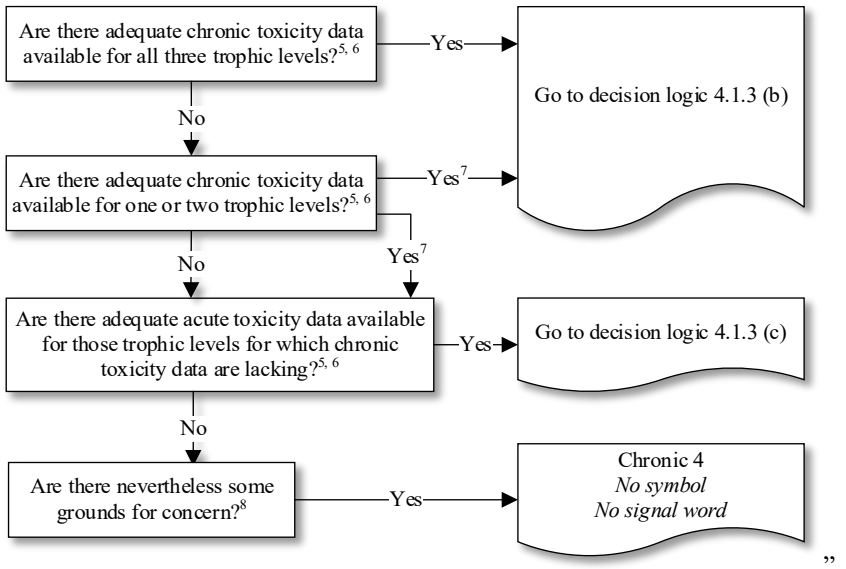
“



”.

4.1.5.2.1 Replace decision logic 4.1.3 (a) with the following *(the text of the footnotes remains unchanged)*:

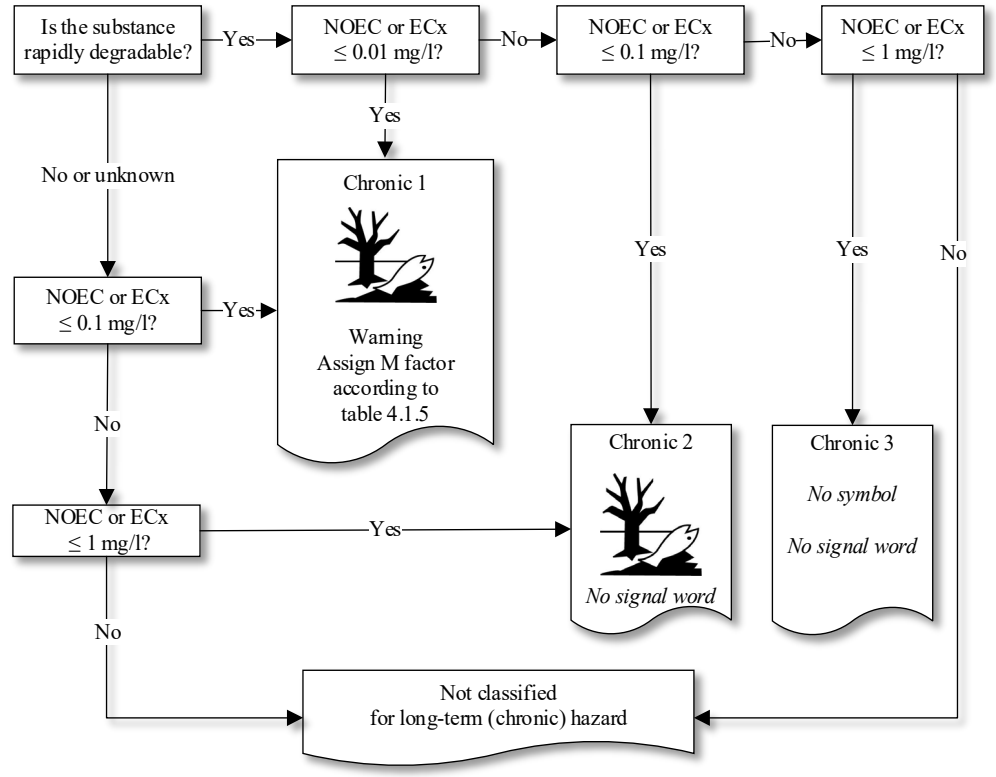
“



”.

4.1.5.2.2 Replace decision logic 4.1.3 (b) with the following *(the text of the footnote remains unchanged)*:

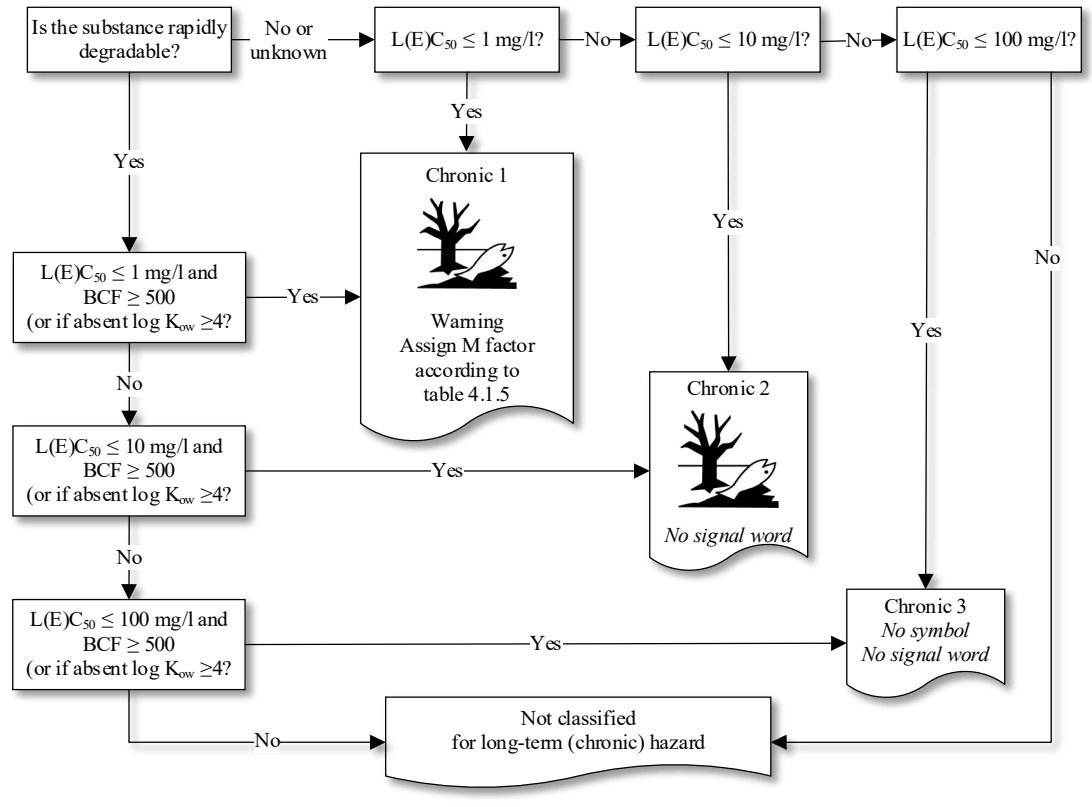
“



”

4.1.5.2.3 Replace decision logic 4.1.3 (c) with the following *(the text of the footnote remains unchanged)*:

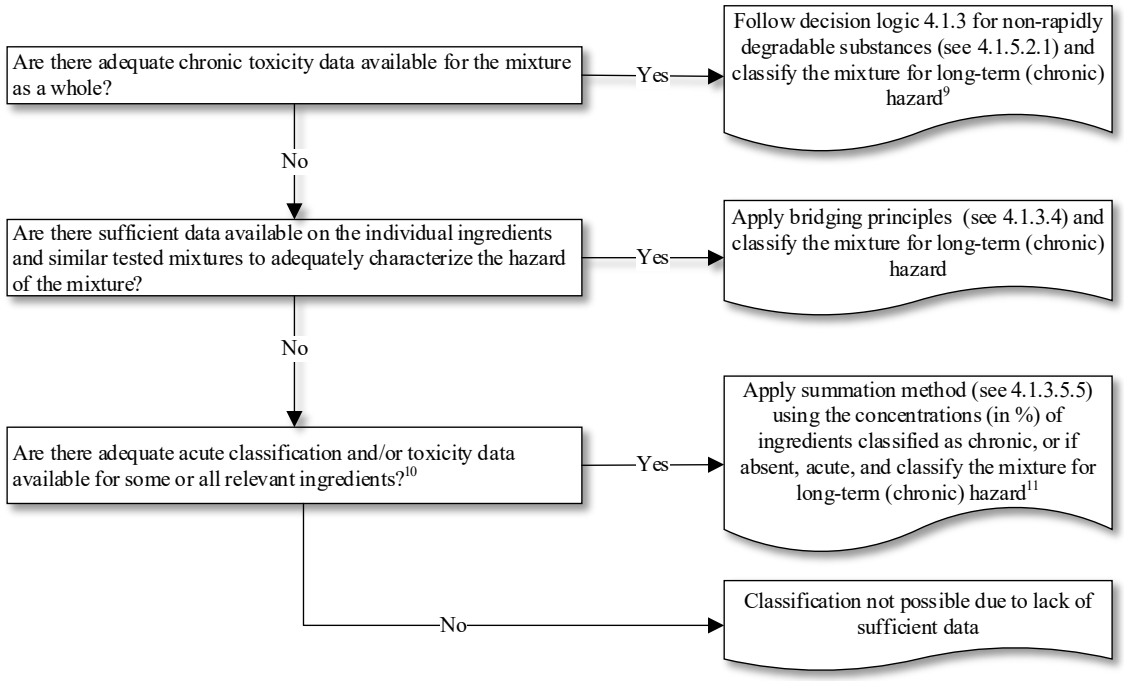
“



”

4.1.5.2.4 Replace decision logic 4.1.4 with the following *(the related footnotes remain unchanged)*:

"

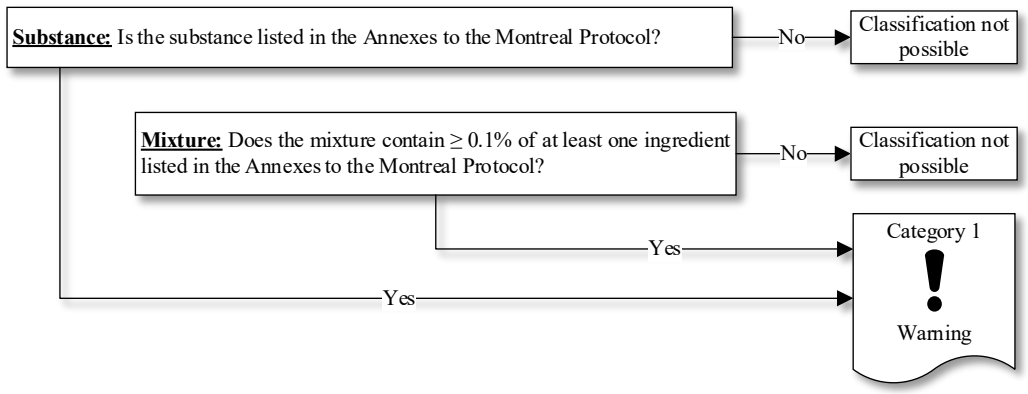


".

Chapter 4.2

4.2.4 Replace decision logic 4.2.1 with the following:

"***Decision logic 4.2.1***



".

Annex 1

Replace current Annex 1 with the following:

“Annex 1

Classification and labelling summary tables

NOTE 1: *The codification of hazard statements is further explained in Annex 3 (Section 1). The hazard statement codes are intended to be used for reference purposes only. They are not part of the hazard statement text and should not be used to replace it.*

NOTE 2: *To provide clarity, assist labelling practitioners and enable comparison between equivalent classification and labelling systems under the GHS and the UN Model Regulations, transport hazard classes, divisions and pictograms are included in Tables A1.1 to A1.30. However, it should be noted that in these tables the UN Model Regulations classification and labelling entries are provided for indicative purposes only. For transport purposes, the classification and labelling provisions prescribed by the UN Model Regulations shall be used (see also Chapter 1.4, section 1.4.10 of the GHS).*

NOTE 3: *GHS hazard pictograms are displayed in the shape of a square set at a point with a black symbol on a white background with a red frame. The transport pictograms (commonly referred to as labels in the UN Model Regulations) shall be displayed on a background of contrasting colour or, where appropriate, shall have either a dotted or solid boundary line as provided in Chapter 5.2, section 5.2.2.2 of the UN Model Regulations and in Tables A1.1 to A1.30 below. For some hazard categories, the symbol, number and border line of the transport pictogram may be shown in white instead of black. Where such an alternative is available it is shown in the relevant tables below (see tables A1.2, A1.3, A1.5, A1.6, A1.12, A1.15 and A1.17).*

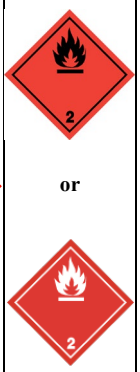
"A1.1 Explosives (see Chapter 2.1 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division**	**GHS pictogram**	**UN Model Regulations pictogram[a]**	**GHS signal word**	**GHS hazard statement**	
Explosives	1	*Not applicable*		*Not applicable*	**Danger**	Explosive	H209 H210[b] H211[b]
	2A	1.1			**Danger**	Explosive	H209
		1.2					
		1.3					
		1.5					
		1.6					
	2B	1.4			**Warning**	Fire or projection hazard	H204
	2C				**Warning**	Fire or projection hazard	H204

[a] *Under the UN Model Regulations, (*) indicates the place for compatibility group and (**) indicates the place for division - to be left blank if explosive is the subsidiary hazard.*

[b] *Additional hazard statements for explosives that are sensitive to initiation or for which sufficient information on their sensitivity is not available (see section 2.1.3 of Chapter 2.1).*

A1.2 **Flammable gases** (see Chapter 2.2 for classification criteria)

Classification				Labelling					GHS hazard statement codes
GHS hazard class	**GHS hazard category**			**UN Model Regulations class or division**	**GHS pictogram**	**UN Model Regulations pictogram[a]**	**GHS signal word**	**GHS hazard statement**	
Flammable gases	**1A**	**Flammable gas**		**2.1**		 **or**	**Danger**	Extremely flammable gas	H220
		Pyrophoric gas						Extremely flammable gas May ignite spontaneously if exposed to air	H220 H232
		Chemically unstable gas	**A**					Extremely flammable gas May react explosively even in the absence of air	H220 H230
			B					Extremely flammable gas May react explosively even in the absence of air at elevated pressure and/or temperature	H220 H231
	1B							Flammable gas	H221
	2			*Not applicable*	*No pictogram*	*Not applicable*	**Warning**		

[a] *Under the UN Model Regulations, pyrophoric gases and chemically unstable gases (A and B) are classified based on their flammability in Class 2, Division 2.1.*

A1.3 Aerosols and chemicals under pressure (see Chapter 2.3 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Aerosols (section 2.3.1)	1	2.1		 or 	Danger	Extremely flammable aerosol Pressurized container: may burst if heated	H222 H229
	2				Warning	Flammable aerosol Pressurized container: may burst if heated	H223 H229
	3	2.2	*No pictogram*	 or 		Pressurized container: may burst if heated	H229
Chemicals under pressure (section 2.3.2)	1	2.1	 and 	 or 	Danger	Extremely flammable chemical under pressure: may explode if heated	H282
	2				Warning	Flammable chemical under pressure: may explode if heated	H283
	3	2.2		 or 		Chemical under pressure: may explode if heated	H284

A1.4 Oxidizing gases (see Chapter 2.4 for classification criteria)

Classification			Labelling				GHS hazard statement code
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram[a]	GHS signal word	GHS hazard statement	
Oxidizing gases	1	2[a]			Danger	May cause or intensify fire; oxidizer	H270

[a] *Under the UN Model Regulations, oxidising gases are classified under the applicable Class 2 division according to their primary gas hazard and will display the applicable Class 2 transport pictogram. In addition, they are assigned a Division 5.1 (flame over circle) transport pictogram due to their oxidizing subsidiary hazard.*

A1.5 **Gases under pressure** (see Chapter 2.5 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram[a]	GHS signal word	GHS hazard statement	
Gases under pressure	Compressed gas	2.2		 or 	Warning	Contains gas under pressure; may explode if heated	H280
	Liquefied gas					Contains gas under pressure; may explode if heated	
	Refrigerated liquefied gas					Contains refrigerated gas; may cause cryogenic burns or injury	H281
	Dissolved gas					Contains gas under pressure; may explode if heated	H280

[a] *Under the UN Model Regulations, this pictogram is not required for gases under pressure that are also toxic or flammable gases. In those cases, the applicable toxic or flammable gas hazard class pictogram is used instead.*

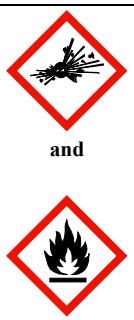
A1.6 **Flammable liquids** (see Chapter 2.6 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Flammable liquids	1	3		 or 	Danger	Extremely flammable liquid and vapour	H224
	2					Highly flammable liquid and vapour	H225
	3				Warning	Flammable liquid and vapour	H226
	4	*Not applicable*	*No pictogram*	*Not applicable*		Combustible liquid	H227

A1.7 **Flammable solids** (see Chapter 2.7 for classification criteria)

Classification			Labelling				GHS hazard statement code
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Flammable solids	1	4.1			Danger	Flammable solid	H228
	2				Warning		

A1.8 Self-reactive substances and mixtures (see Chapter 2.8 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram[a]	GHS signal word	GHS hazard statement	
Self-reactive substances and mixtures	Type A	4.1 Type A		*(Transport may not be allowed)*[b]	Danger	Heating may cause an explosion	H240
	Type B	4.1 Type B			Danger	Heating may cause a fire or explosion	H241
	Types C and D	4.1 Types C and D			Danger	Heating may cause a fire	H242
	Types E and F	4.1 Types E and F			Warning		
	Type G	Type G	*No pictogram*	*Not applicable*	*No signal word*	*No hazard statement*	*None*

[a] *Under the UN Model Regulations, where a Type B substance or mixture has an explosive subsidiary hazard, then the transport pictogram for Divisions 1.1, 1.2 or 1.3 shall also be used without the indication of the division number or the compatibility group. For a substance or mixture of hazard category Type B, special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of the UN Model Regulations for more details).*

[b] *May not be acceptable for transport in the packaging in which it is tested (See Chapter 2.4, paragraph 2.4.2.3.2.1 of the UN Model Regulations).*

A1.9 Pyrophoric liquids (see Chapter 2.9 for classification criteria)

Classification			Labelling				GHS hazard statement code
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Pyrophoric liquids	1	4.2			Danger	Catches fire spontaneously if exposed to air	H250

A1.10 **Pyrophoric solids** (see Chapter 2.10 for classification criteria)

Classification			Labelling				GHS hazard statement code
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Pyrophoric solids	1	4.2			Danger	Catches fire spontaneously if exposed to air	H250

A1.11 **Self-heating substances and mixtures** (see Chapter 2.11 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Self-heating substances and mixtures	1	4.2			Danger	Self-heating; may catch fire	H251
	2				Warning	Self-heating in large quantities; may catch fire	H252

A1.12 **Substances and mixtures, which in contact with water, emit flammable** gases (see Chapter 2.12 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Substances and mixtures, which in contact with water, emit flammable gases	1	4.3			Danger	In contact with water releases flammable gases which may ignite spontaneously	H260
	2				Danger	In contact with water releases flammable gases	H261
	3				Warning		

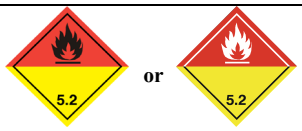
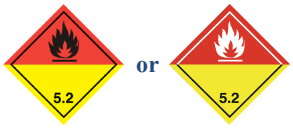
A1.13 **Oxidizing liquids** (see Chapter 2.13 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Oxidizing liquids	1	5.1			Danger	May cause fire or explosion; strong oxidizer	H271
	2				Danger	May intensify fire; oxidizer	H272
	3				Warning		

A1.14 **Oxidizing solids** (see Chapter 2.14 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Oxidizing solids	1	5.1			Danger	May cause fire or explosion; strong oxidizer	H271
	2				Danger	May intensify fire; oxidizer	H272
	3				Warning		

A1.15 **Organic peroxides** (see Chapter 2.15 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram[a]	GHS signal word	GHS hazard statement	
Organic peroxides	Type A	5.2 Type A		*(Transport may not be allowed)*[b]	Danger	Heating may cause an explosion	H240
	Type B	5.2 Type B	 and 	 and if applicable [a]: 	Danger	Heating may cause a fire or explosion	H241
	Types C and D	5.2 Types C and D			Danger	Heating may cause a fire	H242
	Types E and F	5.2 Types E and F			Warning		
	Type G	Type G	*No pictogram*	*Not applicable*	*No signal word*	*No hazard statement*	*None*

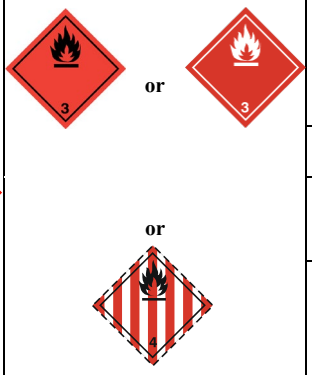
[a] *Under the UN Model Regulations, where a Type B substance or mixture has an explosive subsidiary hazard, then the transport pictogram for Divisions 1.1, 1.2 or 1.3 shall also be used without the indication of the division number or the compatibility group. For a substance or mixture of hazard category Type B, special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of the UN Model Regulations for more details).*

[b] *May not be acceptable for transport in the packaging in which it is tested (See Chapter 2.5, paragraph 2.5.3.2.2 of the UN Model Regulations).*

A1.16 **Corrosive to metals** (see Chapter 2.16 for classification criteria)

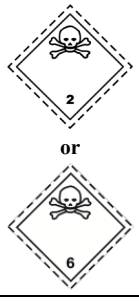
Classification			Labelling				GHS hazard statement code
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Corrosive to metals	1	8			Warning	May be corrosive to metals	H290

A1.17 **Desensitized explosives** (see Chapter 2.17 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division[a]	GHS pictogram	UN Model Regulations pictogram[a]	GHS signal word	GHS hazard statement	
Desensitized explosives	1	3			Danger	Fire, blast or projection hazard; increased risk of explosion if desensitizing agent is reduced	H206
	2	or			Danger	Fire or projection hazard; increased risk of explosion if desensitizing agent is reduced	H207
	3				Warning		
	4	4.1			Warning	Fire hazard; increased risk of explosion if desensitizing agent is reduced	H208

[a] *Under the UN Model Regulations, liquid desensitized explosives are classified in Class 3 and solid desensitized explosives are classified in Division 4.1.*

A1.18 **Acute toxicity** (see Chapter 3.1 for classification criteria)

Classification				Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category		UN Model Regulations class or division[a]	GHS pictogram	UN Model Regulations pictogram[a]	GHS signal word	GHS hazard statement	
Acute toxicity	1, 2	Oral	2.3			Danger	Fatal if swallowed	H300
		Dermal	or				Fatal in contact with skin	H310
		Inhalation					Fatal if inhaled	H330
	3	Oral				Danger	Toxic if swallowed	H301
		Dermal					Toxic in contact with skin	H311
		Inhalation	6.1				Toxic if inhaled	H331
	4	Oral	*Not applicable*		*Not applicable*	Warning	Harmful if swallowed	H302
		Dermal					Harmful in contact with skin	H312
		Inhalation					Harmful if inhaled	H332
	5	Oral		*No pictogram*		Warning	May be harmful if swallowed	H303
		Dermal					May be harmful in contact with skin	H313
		Inhalation					May be harmful if inhaled	H333

[a] *Under the UN Model Regulations, toxic gases are classified in Division 2.3 and toxic substances (as defined in the UN Model Regulations) are classified in Division 6.1.*

A1.19 Skin corrosion/irritation (see Chapter 3.2 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Skin corrosion/irritation	1, 1A, 1B, 1C	8			Danger	Causes severe skin burns and eye damage	H314
	2	*Not applicable*		*Not applicable*	Warning	Causes skin irritation	H315
	3		*No pictogram*		Warning	Causes mild skin irritation	H316

A1.20 Serious eye damage/eye irritation (see Chapter 3.3 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Serious eye damage/eye irritation	1	*Not applicable*		*Not applicable*	Danger	Causes serious eye damage	H318
	2/2A				Warning	Causes serious eye irritation	H319
	2B		*No pictogram*		Warning	Causes eye irritation	H320

A1.21 Respiratory sensitization (see Chapter 3.4 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Respiratory sensitization	1, 1A, 1B	*Not applicable*		*Not applicable*	Danger	May cause allergy or asthma symptoms or breathing difficulties if inhaled	H334

A1.22 Skin sensitization (see Chapter 3.4 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	GHS hazard category	UN Model Regulations class or division	GHS pictogram	UN Model Regulations pictogram	GHS signal word	GHS hazard statement	
Skin sensitization	1, 1A, 1B	*Not applicable*		*Not applicable*	Warning	May cause an allergic skin reaction	H317

A1.23 **Germ cell mutagenicity** (see Chapter 3.5 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division**	**GHS pictogram**	**UN Model Regulations pictogram**	**GHS signal word**	**GHS hazard statement**	
Germ cell mutagenicity	**1, 1A, 1B**	*Not applicable*		*Not applicable*	**Danger**	May cause genetic defects *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	H340
	2				**Warning**	Suspected of causing genetic defects *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	H341

A1.24 **Carcinogenicity** (see Chapter 3.6 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division**	**GHS pictogram**	**UN Model Regulations pictogram**	**GHS signal word**	**GHS hazard statement**	
Carcinogenicity	**1, 1A, 1B**	*Not applicable*		*Not applicable*	**Danger**	May cause cancer *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	H350
	2				**Warning**	Suspected of causing cancer *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	H351

A1.25 **Reproductive toxicity** (see Chapter 3.7 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division**	**GHS pictogram**	**UN Model Regulations pictogram**	**GHS signal word**	**GHS hazard statement**	
Reproductive toxicity	**1, 1A, 1B**	*Not applicable*		*Not applicable*	**Danger**	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)*	H360
	2				**Warning**	Suspected of damaging fertility or the unborn child *(state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)*	H361
	Additional category for effects on or via lactation		*No pictogram*		*No signal word*	May cause harm to breast-fed children	H362

A1.26 Specific target organ toxicity - single exposure (see Chapter 3.8 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division**	**GHS pictogram**	**UN Model Regulations pictogram**	**GHS signal word**	**GHS hazard statement**	
Specific target organ toxicity – single exposure	**1**	*Not applicable*		*Not applicable*	**Danger**	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)*	H370
	2				**Warning**	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)*	H371
	3				**Warning**	May cause respiratory irritation *or* May cause drowsiness or dizziness	H335 H336

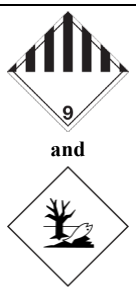
A1.27 Specific target organ toxicity - repeated exposure (see Chapter 3.9 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division**	**GHS pictogram**	**UN Model Regulations pictogram**	**GHS signal word**	**GHS hazard statement**	
Specific target organ toxicity – repeated exposure	**1**	*Not applicable*		*Not applicable*	**Danger**	Causes damage to organs *(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)*	H372
	2				**Warning**	May cause damage to organs *(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)*	H373

A1.28 Aspiration hazard (See chapter 3.10 for classification criteria)

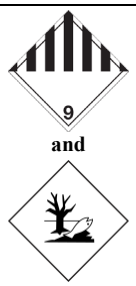
Classification			Labelling				GHS hazard statement codes
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division**	**GHS pictogram**	**UN Model Regulations pictogram**	**GHS signal word**	**GHS hazard statement**	
Aspiration hazard	**1**	*Not applicable*		*Not applicable*	**Danger**	May be fatal if swallowed and enters airways	H304
	2				**Warning**	May be harmful if swallowed and enters airways	H305

A1.29 (a) Hazardous to the aquatic environment, short-term (acute) (see Chapter 4.1 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division[a]**	**GHS pictogram**	**UN Model Regulations pictogram[a]**	**GHS signal word**	**GHS hazard statement**	
Hazardous to the aquatic environment, short-term (Acute)	**Acute 1**	**9**		 **and**	**Warning**	Very toxic to aquatic life	H400
	Acute 2	*Not applicable*	*No pictogram*	*Not applicable*	*No signal word*	Toxic to aquatic life	H401
	Acute 3					Harmful to aquatic life	H402

[a] *Under the UN Model Regulations, for category Acute 1, environmentally hazardous substances are classified under Class 9 and shall bear both the Class 9 transport pictogram and the environmentally hazardous substance transport mark (see Chapter 5.2, section 5.2.1.6 and Chapter 5.3, section 5.3.2.3, of the UN Model Regulations). However, if the environmentally hazardous substance presents any other hazards covered by UN Model Regulations, the Class 9 transport pictogram shall be replaced by the transport pictogram(s) applicable to the hazard(s) present and the environmentally hazardous substance pictogram is not required.*

A1.29 (b) Hazardous to the aquatic environment, long-term (chronic) (see Chapter 4.1 for classification criteria)

Classification			Labelling				GHS hazard statement codes
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division[a]**	**GHS pictogram**	**UN Model Regulations pictogram[a]**	**GHS signal word**	**GHS hazard statement**	
Hazardous to the aquatic environment, long-term (Chronic)	**Chronic 1**	**9**		 **and**	**Warning**	Very toxic to aquatic life with long lasting effects	H410
	Chronic 2				*No signal word*	Toxic to aquatic life with long lasting effects	H411
	Chronic 3	*Not applicable*	*No pictogram*	*Not applicable*	*No signal word*	Harmful to aquatic life with long lasting effects	H412
	Chronic 4					May cause long lasting harmful effects to aquatic life	H413

[a] *Under the UN Model Regulations, for categories Chronic 1 and 2, environmentally hazardous substances are classified under Class 9 and shall bear both the Class 9 transport pictogram and the environmentally hazardous substance transport mark (see Chapter 5.2, section 5.2.1.6 and Chapter 5.3, section 5.3.2.3, of the UN Model Regulations). However, if the environmentally hazardous substance presents any other hazards covered by UN Model Regulations, the Class 9 transport pictogram shall be replaced by the transport pictogram(s) applicable to the hazard(s) present and the environmentally hazardous substance pictogram is not required.*

A1.30 Hazardous to the ozone layer (see Chapter 4.2 for classification criteria)

Classification			Labelling				GHS hazard statement code
GHS hazard class	**GHS hazard category**	**UN Model Regulations class or division**	**GHS pictogram**	**UN Model Regulations pictogram**	**GHS signal word**	**GHS hazard statement**	
Hazardous to the ozone layer	**1**	*Not applicable*		*Not applicable*	**Warning**	Harms public health and the environment by destroying ozone in the upper atmosphere	H420

“.

Annex 3, Section 1, table A3.1.1

Replace the rows for H200, H201, H202, H203 and H205 with the following:

H200	*[Deleted]*
H201	*[Deleted]*
H202	*[Deleted]*
H203	*[Deleted]*
H205	*[Deleted]*

H204, column (4)

Replace “Division 1.4” with “2B, 2C”.

H209, H210, H211

Insert the following new rows:

H209	**Explosive**	Explosives (chapter 2.1)	1, 2A
H210	**Very sensitive**	Explosives (chapter 2.1)	1
H211	**May be sensitive**	Explosives (chapter 2.1)	1

Annex 3, Section 2, table A3.2.2

P203, column (4)

Hazard class “Explosives”, replace “Unstable explosive” by “1, 2A, 2B”

Hazard class “Flammable gases”, replace “A, B (chemically unstable gases)” by:

1A	Chemically unstable gas A
	Chemically unstable gas B

P210, column (4)

Hazard class “Explosives”, replace “Divisions 1.1, 1.2, 1.3, 1.4, 1.5” with “1, 2A, 2B, 2C”

Hazard class “Flammable gases”, replace “1A, 1B, 2” by:

1A	Flammable gas
	Pyrophoric gas
	Chemically unstable gas A
	Chemically unstable gas B
1B, 2	

P222, hazard class “Flammable gases”, column (4)

Insert “1A,” before “Pyrophoric gas”.

P230

In column (2), replace: “**Keep wetted with…**” by “**Keep diluted with…:**”.

In column (4), hazard class “Explosives”: replace: “Divisions 1.1, 1.2, 1.3, 1.5” with “1, 2A, 2B, 2C”.

In column (5), hazard class “Explosives” (divisions 1.1, 1.2, 1.3 et 1.5), replace the current with the following:

> *“- for explosive substances and mixtures that are diluted with solids or liquids, or wetted with, dissolved or suspended in water or other liquids to reduce their explosive properties.*
> …Manufacturer/supplier or competent authority to specify appropriate material*.”*.

P234, hazard class "Explosives"

In column (4), replace "Divisions 1.1, 1.2, 1.3, 1.4, 1.5" with "2A, 2B, 2C".

In column (5), add the following condition for use: *"- Omit where P236 is used".*

P236

Insert the following new row for a new precautionary statement P236:

(1)	(2)	(3)	(4)	(5)
P236	**Keep only in original packaging; Division … in the transport configuration.**	Explosives (chapter 2.1)	2A, 2B, 2C	*- To be applied for explosives assigned a division within Class 1 for transport.* *- May be omitted for single packaging where the transport pictogram displaying the division (within Class 1) appears.* *- May be omitted where the use of different outer packaging results in different divisions for transport.* …Manufacturer/supplier or competent authority to specify the division for transport.

P240, hazard class "Explosives", column (4)

Replace "Divisions 1.1, 1.2, 1.3, 1.4, 1.5" with "1, 2A, 2B, 2C".

P250, hazard class "Explosives", column (4)

Replace "Unstable explosive and divisions 1.1, 1.2, 1.3, 1.4, 1.5" with "1, 2A, 2B, 2C".

P264

In column (2), amend the text to read: "**Wash hands [and…] thoroughly after handling.**"

In columns (3) after "Skin irritation (Chapter 3.2)", insert the following new row: "Serious eye damage (chapter 3.3)".

In column (4), insert "1" for the new row "Serious eye damage (chapter 3.3)".

In column (5):

- Merge the "conditions for use" cells for all the listed hazard classes and categories.
- Replace "… Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling." with *"- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling.".*

P265 (new)

Insert a new entry for the precautionary statement P265, as follows:

(1)	(2)	(3)	(4)	(5)
P265	**Do not touch eyes.**	Serious eye damage (chapter 3.3)	1	
		Eye irritation (chapter 3.3)	2/2A, 2B	

P280

In column (4):

- Hazard class "Explosives", replace "Unstable explosive and divisions 1.1, 1.2, 1.3, 1.4, 1.5" with "1, 2A, 2B, 2C".
- Hazard class "Flammable gases": Insert "1A," before "Pyrophoric gas".

In column (5):

- Merge the "conditions for use" cells for all the listed physical hazards entries (from "explosives" to "desensitized explosives").

- Amend the condition for use for "serious eye damage (chapter 3.3)" and "eye irritation (chapter 3.3)" to read as follows:

  "- *Specify protective gloves and eye/face protection.*
  Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate."

P264+P265 (new)

Insert the following new entry at the end of table A3.2.1:

(1)	(2)	(3)	(4)	(5)
P264 + P265	**Wash hands [and…] thoroughly after handling. Do not touch eyes.**	Serious eye damage (chapter 3.3)	1	*- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling.*
		Eye irritation (chapter 3.3)	2/2A, 2B	

Annex 3, section 2, table A3.2.3

P370, hazard class "Explosives", column (4)

Replace "Unstable explosive and divisions 1.1, 1.2, 1.3, 1.4, 1.5" with "1, 2A, 2B, 2C".

P372 and P373, hazard class "Explosives"

In column (4), replace "Unstable explosive and Divisions 1.1, 1.2, 1.3, and 1.5" with "1, 2A, 2B"

Delete the cells related to division 1.4 in columns (4) and (5)

P375, hazard class "Explosives"

In column (4), replace "Division 1.4" with "2C".

In column (5), delete "*– for explosives of division 1.4 (compatibility group S) in transport packaging.*".

P377 and P381, hazard class "Flammable gases", column (4)

Replace by:

1A	Flammable gas
	Pyrophoric gas
	Chemically unstable gas A
	Chemically unstable gas B
1B, 2	

P380, hazard class "Explosives", column (4)

Replace "Unstable explosive and Divisions 1.1, 1.2, 1.3, 1.4, 1.5" with "1, 2A, 2B, 2C".

P370 + P380 + P375, hazard class "Explosives"

In column (4), replace "Division 1.4" with "2C".

In column (5), delete "*– for explosives of division 1.4 (compatibility group S) in transport packaging*."

P370 + P372 + P380 + P373, hazard class "Explosives"

In column (4), replace "Unstable explosives and divisions 1.1, 1.2, 1.3, 1.5" with "1, 2A, 2B".

Delete the cells related to division 1.4 in columns (4) and (5).

Annex 3, section 2, table A3.2.4

P401, hazard class "Explosives", column (4)

Replace "Unstable explosives and Divisions 1.1, 1.2, 1.3, 1.4, 1.5" with "1, 2A, 2B, 2C".

P403, hazard class "Flammable gases", column (4)

Replace by:

<table>
<tr><td rowspan="4">1A</td><td>Flammable gas</td></tr>
<tr><td>Pyrophoric gas</td></tr>
<tr><td>Chemically unstable gas A</td></tr>
<tr><td>Chemically unstable gas B</td></tr>
<tr><td colspan="2">1B, 2</td></tr>
</table>

Annex 3, section 2, table A3.2.5

P503, hazard class "Explosives", column (4)

Replace "Unstable explosives and Divisions 1.1, 1.2, 1.3, 1.4, 1.5" with "1, 2A, 2B, 2C".

Annex 3, section 3, matrix of precautionary statements

Matrix tables for explosives (Chapter 2.1) (*unstable explosives and explosives of divisions 1.1, 1.2, 1.3, 1.5 and 1.4)*

Replace with the following:

EXPLOSIVES
(CHAPTER 2.1)

Hazard category	**Symbol**		**Signal word**	**Hazard statement**	
1	Exploding bomb		Danger	H209	Explosive
				H210	Very sensitive
				H211	May be sensitive

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
P203 **Obtain, read and follow all safety instructions before use.** P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P230 **Keep diluted with...** - *for explosive substances and mixtures that are diluted with solids or liquids, or wetted with, dissolved or suspended in water or other liquids to reduce their explosives properties* … Manufacturer/supplier or the competent authority to specify appropriate material. P240 **Ground and bond container and receiving equipment.** *– if the explosive is electrostatically sensitive.* P250 **Do not subject to grinding/shock/friction/...** *– if the explosive is mechanically sensitive.* …Manufacturer/supplier or the competent authority to specify applicable rough handling. P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P372 + P380 + P373 **In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.**	P401 **Store in accordance with…** … Manufacturer/supplier or the competent authority to specify local/regional/ national/international regulations as applicable.	P503 **Refer to manufacturer/ supplier/… for information on disposal/recovery/ recycling** … Manufacturer/supplier or the competent authority to specify appropriate source of information in accordance with local/regional/ national/international regulations as applicable.

EXPLOSIVES
(CHAPTER 2.1)

Hazard category	Symbol		Signal word	Hazard statement	
2A	Exploding bomb		Danger	H209	Explosive
2B	Exploding bomb		Warning	H204	Fire or projection hazard

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
P203 **Obtain, read and follow all safety instructions before use.** P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P230 **Keep diluted with...** *- for explosive substances and mixtures that are diluted with solids or liquids, or wetted with, dissolved or suspended in water or other liquids to reduce their explosives properties* … Manufacturer/supplier or the competent authority to specify appropriate material. P234 **Keep only in original packaging.** *- Omit where P236 is used.* P236 **Keep only in original packaging; Division … in the transport configuration.** *- to be applied for explosives assigned a division within Class 1 for transport.* *- may be omitted for single packaging where the transport pictogram displaying the division (within Class 1) appears.* *- may be omitted where the use of different outer packaging results in different divisions for transport.* … Manufacturer/supplier or the competent authority to specify the division for transport. P240 **Ground and bond container and receiving equipment.** *– if the explosive is electrostatically sensitive.* P250 **Do not subject to grinding/shock/friction/...** *– if the explosive is mechanically sensitive.* …Manufacturer/supplier or the competent authority to specify applicable rough handling. P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P372 + P380 + P373 **In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.**	P401 **Store in accordance with…** … Manufacturer/supplier or the competent authority to specify local/regional/ national/international regulations as applicable.	P503 **Refer to manufacturer/ supplier/… for information on disposal/recovery/ recycling** … Manufacturer/supplier or the competent authority to specify appropriate source of information in accordance with local/regional/national/ international regulations as applicable.

EXPLOSIVES
(CHAPTER 2.1)

Hazard category	Symbol	Signal word	Hazard statement
2C	Exclamation mark 	Warning	H204 Fire or projection hazard

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P230 **Keep diluted with...** *- for explosive substances and mixtures that are diluted with solids or liquids, or wetted with, dissolved or suspended in water or other liquids to reduce their explosives properties* … Manufacturer/supplier or the competent authority to specify appropriate material. P234 **Keep only in original packaging.** *- Omit where P236 is used.* P236 **Keep only in original packaging; Division … in the transport configuration.** *- to be applied for explosives assigned a division within Class 1 for transport.* *- may be omitted for single packaging where the transport pictogram displaying the division (within Class 1) appears.* *- may be omitted where the use of different outer packaging results in different divisions for transport.* … Manufacturer/supplier or the competent authority to specify the division for transport. P240 **Ground and bond container and receiving equipment.** *– if the explosive is electrostatically sensitive.* P250 **Do not subject to grinding/shock/friction/...** *– if the explosive is mechanically sensitive.* …Manufacturer/supplier or the competent authority to specify applicable rough handling. P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P380 + P375 **In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion**	P401 **Store in accordance with…** … Manufacturer/supplier or the competent authority to specify local/regional/ national/international regulations as applicable.	P503 **Refer to manufacturer/ supplier/… for information on disposal/recovery/ recycling** … Manufacturer/supplier or the competent authority to specify appropriate source of information in accordance with local/regional/national/ international regulations as applicable.

”.

Desensitized explosives (chapter 2.17), categories 1, 2, 3 and 4, column "Prevention",

Replace the text of precautionary statement P230 with the following:

"**Keep diluted with**…

…Manufacturer/supplier or competent authority to specify appropriate material."

Acute toxicity, oral, (chapter 3.1), categories 1, 2, 3 and 4, column "Prevention"

Replace the text of precautionary statement P264 with the following:

"Wash hands [and…] thoroughly after handling.
- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling.".

Acute toxicity, dermal, (chapter 3.1), categories 1 and 2, column "Prevention"

Replace the text of precautionary statement P264 with the following:

"Wash hands [and…] thoroughly after handling.
- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling."

Skin corrosion/irritation, (chapter 3.2), categories 1, A1 to 1C and 2, column "Prevention"

Replace the text of precautionary statement P264 with the following:

"Wash hands [and…] thoroughly after handling.
- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling.".

Eye damage/irritation, (chapter 3.3), categories 1 and 2/2A, column "Prevention"

Insert the following new combined precautionary statement:

"P264+P265
Wash hands [and…] thoroughly after handling. Do not touch eyes.
- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling."

For P280, add: "*- Specify protective gloves and eye/face protection." before the sentence starting with "*The competent authority…".

Eye damage/irritation, (chapter 3.3), category 2B, column "Prevention"

Insert the following new combined precautionary statement:

"P264+P265
Wash hands [and…] thoroughly after handling. Do not touch eyes.
- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling."

Reproductive toxicity (chapter 3.7) (effects on or via lactation), column "Prevention"

Replace the text of precautionary statement P264 with the following:

"**Wash hands [and…] thoroughly after handling.**
- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling.".

Specific target organ toxicity (single exposure) (chapter 3.8), categories 1 and 2, column "Prevention"

Replace the text of precautionary statement P264 with the following:

"**Wash hands [and…] thoroughly after handling.**
- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling.".

Specific target organ toxicity (repeated exposure) (chapter 3.9), category 1, column "Prevention"

Replace the text of precautionary statement P264 with the following:

"**Wash hands [and…] thoroughly after handling. Do not touch eyes**.
- text in square brackets to be used when the manufacturer/supplier or the competent authority specify other parts of the body to be washed after handling.".

Annex 4

A4.3.9 Amend the heading of section 9 to read "Physical and chemical properties".

Annex 9

Insert the following Note under the heading of Annex 9 and delete current footnote 1:

***"NOTE**: The text of Annex 9 is largely based on the "Guidance document on the use of the harmonised system for the classification of chemicals which are hazardous for the aquatic environment" published by OECD in 2001, as Series on Testing and Assessment No.27 (ENV/JM/MONO(2001)8). The Guidance document has remained unchanged since its publication in 2001, but since then, new OECD Test Guidelines or Guidance Documents have been adopted which are an additional source of information. For a list of updated references, refer to appendices V and VI to Annex 9.".*

A9.3.2.7.2 Replace "OECD Test Guideline on Lemna (in preparation)" with "OECD Test Guideline on Lemna (in preparation)[1]" and add a footnote "1" to read as follows: "[1] *Published. OECD Test Guideline No. 221: Lemna sp. Growth Inhibition Test.".*

A9.4.2.4.9 Replace "(e.g. the OECD Test Guideline 303)" with "(e.g. the OECD Test Guideline 303)[3]" and add a footnote "3" to read as follows: "[3] *OECD Test Guidelines 311 and 314 are also available)*."

Appendix V to Annex 9

- Item 1:

  Amend sub-paragraphs (b) to (e) to read as follows:

  "(b) ISO guidelines: Available from the national standardisation organisations or ISO (http://www.iso.org/iso/home.html);

  (c) OECD guidelines for the testing of chemicals. OECD, Paris, 1993 with regular updates (http://www.oecd.org/env/ehs/testing/oecdguidelinesforthetestingofchemicals.htm);

  (d) OPPTS guidelines: US-EPA homepage (https://www.epa.gov/test-guidelines-pesticides-and-toxic-substances)

  (e) ASTM: (https://www.astm.org/Standard/standards-and-publications.html)".

- Item 2:

  Amend the following entries to read as follows:

  "OECD Test Guideline 201 (1984) (Updated in 2011). Alga, Growth Inhibition Test"

  "OECD Test Guideline 202 (1984) (Updated in 2004) Daphnia sp. Acute Immobilisation Test and Reproduction Test"

  "OECD Test Guideline 203 (1992) (Updated in 2019) Fish, Acute Toxicity Test"

  "OECD Test Guideline 210 (1992) (Updated in 2013) Fish, Early-Life Stage Toxicity Test"

"OECD Test Guideline 211 (1998) (Updated in 2012) Daphnia magna Reproduction Test. Additional OECD test guidelines include:

OECD Test Guideline 219 (2004) Sediment-Water Chironomid Toxicity Using Spiked Water
OECD Test Guideline 233 (2010) Sediment-Water Chironomid Life-Cycle Toxicity Test Using Spiked Water or Spiked Sediment
OECD Test Guideline 238 (2014) Sediment-Free Myriophyllum Spicatum Toxicity Test
OECD Test Guideline 240 (2015), Medaka Extended One-generation Test
OECD Test Guideline 242 (2016) Potamopyrgus antipodarum Reproduction Test
OECD Test Guideline 243 (2016) Lymnaea stagnalis Reproduction Test"

- Item 3:

Amend the following entries to read as follows:

"OECD Test Guideline 209 (1984) (Updated in 2010). Activated sludge, respiration inhibition test. OECD guidelines for testing of chemicals"

"OECD Test Guideline 303A (1981). Simulation test-aerobic sewage treatment: couple units tests. OECD guidelines for testing of chemicals. Additional test guidelines include:

OECD Test Guideline 311 (2006), Anaerobic Biodegradability of Organic Compounds in Digested Sludge: by Measurement of Gas Production
OECD Test Guideline 314 (2008) Simulation Tests to Assess the Biodegradability of Chemicals Discharged in Wastewater."

"OECD Test Guideline 307 (2002). Aerobic and anaerobic transformation in soil. OECD guidelines for testing of chemicals"

OECD Test Guideline 308 (2002). Aerobic and anaerobic transformation in aquatic sediment systems. OECD guidelines for testing of chemicals

OECD Test Guideline 309 (2004). Aerobic mineralisation in surface water – Simulation biodegradation test. OECD guidelines for testing of chemicals. Additional test guidelines include:

OECD Test Guideline 310 (2014) Ready Biodegradability - CO_2 in sealed vessels (Headspace Test)
OECD Test Guideline 311 (2006) Anaerobic Biodegradability of Organic Compounds in Digested Sludge: by Measurement of Gas Production
OECD Test Guideline 316 (2008) Phototransformation of Chemicals in Water – Direct Photolysis

- Item 4:

Amend the following entries to read as follows:

"OECD Test Guideline 117, 1989 (Updated in 2004). OECD Guideline for testing of chemicals. Partition Coefficient (n-octanol/water), High Performance Liquid Chromatography (HPLC) Method.".

"OECD Test Guideline 305, 1996 (Updated in 2012). Bioconcentration: Flow-through Fish Test. OECD Guidelines for testing of Chemicals."

"OECD Test Guideline 123. Partition Coefficient (1-Octanol/Water). Slow-stirring method. OECD Guidelines for testing of chemicals. Additional test guidelines include OECD Test Guideline 315 (2008) Bioaccumulation in Sediment-dwelling Benthic Oligochaetes".

Annex 9, Appendix VI

Amend all references to the following entries to read as follows:

> "OECD 1998. Harmonized Integrated Hazard Classification System for Human Health and Environmental Effects of Chemical Substances. OECD, Paris. (Document ENV/JM/MONO(2001)6). (Updated in 2001) Series on Testing and Assessment No. 33, OECD, Paris."
>
> "OECD 2000. Guidance Document on Aquatic Toxicity Testing of Difficult Substances and Mixtures, Series on Testing and Assessment No. 23, OECD, Paris. Updated in 2019: OECD 2019. Second edition - Guidance Document on Aqueous-Phase Aquatic Toxicity Testing of Difficult Test Chemicals, Series on Testing and Assessment No. 23 (second edition). OECD, Paris.".

Annex 10, Appendix

Under "Bibliography"

- Point 1, after "Guideline 201" insert "(Updated in 2011)".
- Point 2, after "Guideline 202" insert "(Updated in 2004)".
- Point 3, after "Guideline 203" insert "(Updated in 2019)".
- Point 5, after "Guideline 210" insert "(Updated in 2013)".

Amend the footnote to OECD Test Guideline 204 to read: "This test guideline has been cancelled.".