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COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS AND ON THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS
Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals
(Fourth session, 9-11 December 2002, agenda item 2)

EDITORIAL AMENDMENTS TO THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS)

Submitted by the GHS Editorial Group

This document contains the technical and editorial amendments to the draft Globally Harmonized System of Classification and Labelling of Chemicals as introduced into the text by the GHS Editorial Group according to its terms of reference (Third session of the Sub-Committee, Annex 2 of the report).

Chapter	Paragraph/ table/ figure	Original sentence		Amended sentence
	AMENDMENTS TO THE GHS (by the GHS Editorial Group) *Note: The amendments listed below do not include the purely editorial modifications of the original text.*			
	Part 1	**INTRODUCTION**		
1.1	1.1.1.2/last sentence	...,many countries have not been able to have a system at all.		...,many countries have no system at all.
	1.1.1.4	"mankind" deleted		replaced by " human health"
	1.1.1.5/2nd sentence	..and would be used for the elaboration of the GHS, the requirements of which formed the primary basis for the work:		...and were used as the primary basis for the elaboration of the GHS:
	1.1.2.2	...for each hazard have been developed as well as examples of classification of chemicals to illustrate how…		…for each hazard have been developed. Some examples of classification of chemicals in the text, as well as in Annex 7, illustrate how...
	1.1.2.5	There were arguments raised about certain sectors or products be exempted…		There were concerns raised about whether certain sectors or products should be exempted…
	1.1.2.5 (b)(ii)	...specific test methods for endpoints such as flammability and explosivity.		...specific test methods for hazard classes such as flammability and explosivity.
	1.1.3.1.5.1	...a chemical, it must follow the harmonized...		...a chemical, it should follow the harmonized...
	1.1.3.2.1/ beginning of the para.	The United Nations Economic and Social Council (ECOSOC) has the international responsibility for implementation and oversight of the completed GHS. It has reconfigured an existing committee and subcommittee in its structure to form a new subcommittee on the GHS, and a new parent committee responsible for the GHS subcommittee as well as the existing subcommittee on the Transport of Dangerous Goods. The Subcommittee on...		For the purposes of implementing the GHS, the United Nations Economic and Social Council (ECOSOC) reconfigured the UN Committee of Experts on the Transport of Dangerous Goods by resolution 1999/65 of 26 October 1999. The new Committee of Experts on the Transport of Dangerous Goods and the Globally Harmonized System of Classification and Labelling of Chemicals (UNSCETDG/GHS), maintains its Sub-Committee of Experts on the Transport of Dangerous Goods (UNSCETDG) and a new subsidiary body, the Sub-Committee of Experts on ...
	1.1.4.1	This document describes the GHS. It consolidates the work of the technical focal points, and adds guidance, examples, and descriptions to assist countries and organizations to develop tools to implement the system in their own requirements.		This document describes the GHS. It contains harmonized classification criteria and hazard communication elements. In addition, guidance is included in the document to assist countries and organizations in the development of tools for implementation of the GHS. The GHS is designed to permit self-classification. The provisions for implementation of the GHS allows the uniform development of national, while remaining flexible enough to accommodate any special requirements that might have to be met. Furthermore, the GHS is intended to create user-friendly approach, to facilitate the work of enforcement bodies and to reduce the administrative burden.
1.2	Definition list	**"ADR"** means ...by Road (United Nations publication ECE/TRANS/140 (Vol. I and II)).		***ADR*** means…. by Road, as amended;
		-		***Competent authority*** means any national body(ies) or authority(ies) designated or otherwise recognized as such in connection with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS);
		Dermal Corrosion means…4hours;		***Dermal Corrosion*** :see *skin corrosion.* ;
		Dermal irritation means…4 hours;		***Dermal irritation*** :see *skin irritation* ;
		DIN…		deleted

chapter	Paragraph/ table/ figure	Original sentence		Amended sentence
1.2	Definition list	-		***EC Number or (ECN°)*** is a reference number used by the European Communities to identify dangerous substances, in particular those registered under EINECS;
	Definition list	***GESAMP*** ……...of Marine Environmental Protection		***GESAMP*** …Protection of IMO/FAO/ UNESCO/WMO/WHO/IAEA/UN/UNEP.“;
	Definition list	***GHS*** means “The Globally Harmonized System for Hazard Classification and Communication”.		***GHS*** means “the Globally Harmonized System of Classification and Labelling of Chemicals”;
	Definition list	-		***ILO*** means the “International Labour Organization”;
	Definition list	-		***ISO*** means International Standards Organization;
	Definition list	***LC_{50}*** ... of a material…		***LC_{50}***... of a chemical ...
	Definition list	***LD_{50}*** means the amount of a material…..		***LD_{50}*** means the amount of a chemical…
	Definition list	***Liquid*** means a substance which...A viscous substance for which...		***Liquid*** means a substance or mixture which...A viscous substance or mixture for which...
	Definition list	-		***Mutation*** means a permanent change in the amount or structure of the genetic material in a cell.;
	Definition list	***Organic peroxide*** means a ...by organic radicals.		***Organic peroxide*** means a .... by organic radicals. The term also includes organic peroxide formulation (mixtures);
	Definition list	***Pictogram*** means a composition...		***Pictogram*** means a graphical composition...
	Definition list	***PIC…***		deleted
	Definition list	***Readily combustible solid*** ... pasty substance...		***Readily combustible solid……..*** pasty substance or mixture……....
	Definition list	-		***Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria*** means the latest revised edition of the United Nations publication bearing this title, and any published amendment thereto;
	Definition list	-		***Recommendations on the Transport of Dangerous Goods, Model Regulations*** means the latest revised edition of the United Nations publication bearing this title, and any published amendment thereto;
	Definition list	***Self-heating substance*** means a solid or liquid substance, other …		***Self-heating substance*** means a solid or liquid substance or mixture, other …
	Definition list	***Self-reactive substance...*** solid substance liable...		***Self-reactive substance ….***solid substance or mixture liable...
	Definition list	***Eye corrosion*** means...		***Serious eye damage*** means …
	Definition list	***Dermal sensitizer*** means…		***Skin sensitizer*** means …
	Definition list	-		***UNITAR*** means “the United Nations Institute for Training and Research”;
1.3	1.3.1.1/title	1.3.1.1.OECD Task Force on HCL		1.3.1.1 Health and Environmental Hazard Classes: OECD Task Force on Harmonization of Classification and Labelling (OECD Task Force on HCL)
	1.3.1.1.2 (a)	Eye Irritation/eye corrosion		Eye Irritation/serious eye damage
	1.3.2.4.6/4th sentence	…(skin and eye irritation/corrosion).		…(skin and eye irritation/corrosion or serious damage).
	1.3.2.3 (b)	…„then the bridging principles included in each specific chapter…		…„then bridging principles included and explained in each specific chapter…
1.4		original paragraph 1 deleted		
	1.4.10.5.5.3	If tactile warnings are used, ... shall conform with....		If tactile warnings are used, ... should conform with....
	ex para 1	The following sections ...GHS SDS.		deleted
1.5	1.5.2/title	<u>When is a SDS required?…for the SDS</u>		Criteria for determining whether an SDS should be produced
	Title table 1.5.1	Table 1.5.1: Cut-off values/Concentration limits for each hazard class		Table 1.5.1: Cut-off values/Concentration limits for each *health and environmental* hazard class

chapter	Paragraph/ table/ figure	Original sentence		Amended sentence
1.5	Tab. 1.5.2, para 14	Marine pollutant (Y/N)		Marine pollutant (Yes/No)
	Part 2	**PHYSICAL HAZARDS**		
Part 2	In all chapters			In all paras 2.x.3, the following sentence has been inserted after the first sentence: "Annex 2 contains summary tables about classification and labelling. "
Part 2	In all chapters			In all paras 2.x.4, after the title, the following sentence has been inserted:"The decision logic (and guidance), which follow(s), is/are not part of the harmonized classification system, but has/have been provided here as additional guidance. It is strongly recommended that the person responsible for classification study the criteria before and during use of the decision logic."
Part 2	In all chapters	Footnotes such as: "…is not part of the agreed text on the harmonised classification for…but has been provided in this chapter as additional guidance on…"		All these footnotes deleted.
	In all concerned chapters			In para 1/title, "definitions and general considerations", "general considerations" deleted when there were not any.
	In all concerned chapters	Classification criteria for mixtures: The same criteria as for substances apply.		deleted in chapters 2.1, 2.2, 2.4, 2.5, 2.6, 2.7, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14 and 2.16.
2.1	in all chapter 2.1	All text addressed to "explosive substance(s)"		All text addressed to "explosive substance(s) and/or mixture(s)"
	2.2.3	"Allocation of label elements"		Sub-title deleted
	2.2.4, first sentence	…..(see ISO 10156:1996).		...(see ISO 10156:1996 Gases and gas mixtures – Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets).
	2.2.5			Added as last sentence under "Formula": "Where a gas mixture contains an inert diluent other than nitrogen, the volume of this diluent is adjusted to the equivalent volume of nitrogen using the equivalency factor for the inert gas (Ki)."
2.3	2.3.1	"There are no general considerations".		deleted
	2.3.4.2.1	In the formula: " I%=weight fraction of component I in the product"		In the formula and in the associated definitions, "I" replaced with "wi" and "wi% = mass fraction of component i in the product"
2.4	2.4.2/ Title	Classification criteria for substances		Classification criteria
	2.4.2			After Table 2.4.1, the following note is added: "NOTE: Artificial air containing up to 23.5% vol oxygen may be regarded as not oxidizing for some regulatory purposes (e.g. transport)."
	2.4.4.1	First sentence: "To classify...in ISO 10156:1996 should be performed."		"To classify in ISO 10156:1996 Gases and gas mixtures – Determination of fire potential and oxidizing ability for the selection of cylinder valve outlet - should be performed."
2.5	2.5.2/ Title	Classification criteria for substances		Classification criteria
2.6	2.6.2/ Title	Classification criteria for substances		Classification criteria
2.7	2.7.2/ Title	Classification criteria for substances		Classification criteria
	2.7.2.1	Powdered, granular or pasty substances shall be …		Powdered, granular or pasty substances or mixtures shall be...
	Table 2.7.1			After "substances" in Criteria of Category 1 and 2: "or mixtures" was inserted.

chapter	Paragraph/ table/ figure	Original sentence		Amended sentence
	Note to Table 2.7.1			In the first sentence, "or mixture(s)" has been inserted after "substance(s)". (2 cases)
	2.7.4			In Decision logic 2.7, "or mixtures" has been inserted after "substances". (2 cases)
2.8	2.8.1 and 2.8.2	All text addressed to "substance(s)"		"and/or mixture(s)" systematically inserted after "substance(s)"
	2.8.1.2	There are no general considerations.		A self-reactive substance or mixture is regarded as possessing explosive properties when in laboratory testing the formulation is liable to detonate, to deflagrate rapidly or to show a violent effect when heated under confinement.
	2.8.2.1 (b)	They are oxidizing substances, according to...		They are oxidizing liquids or solids, according to...
	2.8.3	Table 2.8.1: Label elements for self-reactive substances		Table 2.8.1: Label elements for self-reactive substances and mixtures
	2.8.4.1, first sentence	To classify a self-reactive substance test series A to…		To classify a self-reactive substance or mixture test series A to…
	2.8.4.1, third sentence	The properties of self-reactive substances which are …		The properties of self-reactive substances or mixtures which are …
	2.8.4.2, first sentence			"and mixtures" inserted after "substances"
2.9	2.9.4.2			"or mixture" has been inserted after "substance"
2.10	Table 2.10.1, Note			"or mixture(s) inserted after "substance"/ (3 cases)
	2.10.4.2			"or mixture" inserted after "substance"/ (2 cases)
2.11	2.11.1 and 2.11.2	All text addressed to " substance(s)"		"and/or mixture(s)" systematically inserted after "substance(s)"
	Table 2.11.1			New Note 2:"The criteria are based on the self-ignition temperature of charcoal, which is 50°C for a sample cube of 27m3. Substances and mixtures with a temperature of spontaneous combustion higher than 50°C for a volume of 27m3 should not be assigned to this hazard class. Substances and mixtures with a spontaneous ignition temperature higher than 50°C for a volume of 450 litres should not be assigned to hazard category 1 of this hazard class."
	Table 2.11.1 and 2.11.2/Titles			"and mixtures" inserted after "substances"
	2.11.4.1	To classify a self-heating substance/mixture, test method N.4…		To classify a self-heating substance, test method N.4…
2.12	2.12.1 and 2.12.2	All text addressed to " substance(s)"		"and/or mixture(s)" systematically inserted after "substance(s)"
	Table 2.12.1			"mixtures" inserted after "substances" in the title. In the table, after "substance" in Criteria of Category 1,2 and 3: "or mixture" was inserted. In the notes to the table, "or mixture(s)" systematically inserted after "substance(s).
	Table 2.12.2			"and mixtures" inserted after "substances" in the title.
	2.12.4.1	To classify a substance which,…		To classify a substance or mixture which,…
	2.12.4.2(c)	The substance is known...		The substance or mixture is known...

chapter	Paragraph/ table/ figure	Original sentence		Amended sentence
2.13	Table 2.13.1			After "substance" in Criteria of Category 1, 2 and 3: "or mixture" was inserted everywhere.
	Decision logic 2.13			"(or mixture)" inserted after "substance" everywhere.
	2.13.4.2.1	Experience in the handling and use of substances may…		Experience in the handling and use of substances or mixtures may…
	2.13.4.2.2	In some cases, substances may ...properties of the substance.		In some cases, substances or mixtures may…..… properties of the substance or mixture.
	Table 2.13.1			After "substance" in Criteria of Category 1, 2 and 3: "or mixture" was inserted everywhere, as well as in the note to the table.
2.14	2.14.4.2.1			"or mixtures" inserted after "substances"
2.15	2.15.1.1			New sentence inserted after the first one:"The term also includes organic peroxide formulations (mixtures)". Next sentence: "or mixtures" inserted after "substances".
	2.15.1.2			New text inserted: "An organic peroxide is regarded as possessing explosive properties when in laboratory testing the formulation is liable to detonate, to deflagrate rapidly or to show a violent effect when heated under confinement."
	2.15.2.2 (c)			"or mixture" inserted after "substance"
	2.15.2.2 (g)	Last sentence of the para: "If the mixture is not thermally …"		Last sentence of the para: "If the organic peroxide is not thermally …"
2.16	2.16.2	A substance that is corrosive…..…		"A substance or a mixture which is corrosive…"
	Tables 2.16.1 and 2.16.2/Titles			"and mixtures" inserted after "substances" in the titles.
	Part 3	**HEALTH AND ENVIRONMENTAL HAZARDS**		
Part 3	In all chapters			In all paras "3.x.4", the following sentence has been inserted after the first sentence: "Annex 2 contains summary tables about classification and labelling. "
Part 3	In all chapters			In all paras 3.x.5, after the title, the following sentence has been inserted:"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."
Part 3	In all chapters	Footnotes such as: "…is not part of the agreed text on the harmonised classification for…but has been provided in this chapter as additional guidance on…"		All these footnotes deleted.
3.1.	Tables 3.1.1 and 3.1.2			New note to the table: *NOTE: gases concentration are expressed in parts per million per volume (ppmV)*
	3.1.2.4	...has cut-off values of 5mg/kg bodyweight by the oral route, 50 mg/….and 0.05 mg/l for dusts and mists. These toxicity values are currently used...		...has cut-off values (see Table 3.1.1) currently used…
	3.1.2.6/title	3.1.2.6 Specific considerations for toxicity		3.1.2.6 Specific considerations for inhalation toxicity
	Table 3.1.2/title	Conversion from the experimentally obtained acute toxicity range estimate or a classification to point estimates for the respective routes of exposure.		Conversion from experimentally obtained acute toxicity range values (or acute toxicity hazard categories) to acute toxicity point estimates for the respective routes of exposure

chapter	Paragraph/ table/ figure	Original sentence		Amended sentence
	Table 3.1.2/title third column	[Conversion value]		[Converted Acute Toxicity point estimate]
3.2	All chapter/where appropriate	dermal		skin
3.3	3.3.2.4/4th sentence	…,especially when buffering capacity is known.		…,especially when associated with significant buffering capacity.
	Fig 3.3.1			Information on step 9 completed
3.4	3.4.2.1.3	…IgE…		...Immunoglobulin E (IgE)...
3.6	3.6.2.7	The proceedings of a WHO/IPCS working group to harmonized risk assessment for carcinogenicity points…		The proceedings of a WHO/IPCS workshop on the *Harmonization of Approaches to the Assessment of Risk from Exposure to Chemicals, on Developing a Conceptual Framework for Cancer Risk Assessment (1999, Lyon, France)* , points…
	3.6.5.2	Excerpts from the International Agency for Research on Cancer (IARC) evaluation of the strength of evidence of carcinogenicity arising from human and experimental data …		Excerpts from monographs of the International Agency for Research on Cancer (IARC) Monographs Programme on the Evaluation of the Strength of Evidence of Carcinogenic Risks to Humans follow as in 3.6.5.2.1 and 3.6.5.2.25 .
	3.6.5.2.1.1 (a)	The Working Group considers ...		The Working Group on Carcinogenicity of the OECD Task Force on Harmonization of Classification and Labelling considered...
3.7	3.7.2.1	…,effects on lactation are allocated to a separate hazard class.		…,effects on lactation are allocated to a separate hazard category.
	3.7.6/Title	Decision logic for effects on or via lactation:		Decision logic for classification of effects on or via lactation:
	D.logic 3.7.3			In the boxes, "class" is replaced with "category"
3.8	3.8.1.3/last sentence	...source of evidence for this endpoint.		...source of evidence for this hazard class.
	3.8.2.9.3	It is important to recognize that the guidance values…		The guidance values…
3.9	3.9.2.7.1	...identifiable toxic effect.		...identifiable toxic effect demonstrates support for classification.
	3.9.2.7.3, first bullet	…its metabolites, or accumulation of effect owing to the ability of the detoxification process becoming overwhelmed by repreated exposure to the substance or its metabolites;		…its metabolites, or due to the overwhelming of the de-toxification process by repeated exposure;
	Table 3.9.1 and 3.9.2			New Note to the two tables: *Note: "bw" is for "body weight", "h" for" hour" and "d" for "day".*
	3.9.2.9.8	"It is important to recognize that the guidance values…"		"The guidance values…"
	Table 3.9.3	Third row, third column, upper part of the cell: "1.0% ingredient < 10% (note 4)"		"1.0% ingredient < 10% (note 3)" moved to second row,third column.
3.10	3.10.1.1 (new)			Definitions: shifted from original text of annex 8, such as acute aquatic toxicity, availability, bioavailability, bioaccumulation, bioconcentration, chronic aquatic toxicity, complex mixtures and degradation.
	3.10.1.2			New text: "3.10.1.2.1 The basic elements……system are:"
	3.10.1.3/title	Acute toxicity		Acute aquatic toxicity
	3.10.1.6/title	Chronic toxicity		Chronic aquatic toxicity

chapter	Paragraph/ table/ figure	Original sentence		Amended sentence
3.10	3.10.7.2	-		New second sentence:" For instance, application of the criteria to metals and metal compounds is contingent on completion of an appropriate validation exercise, as provided in OECD series on Testing and Assessment n° 29 reproduced in Annex 9 to this document."
	3.10.7.3			Added to the end of the para:"(As noted above, Annex 9 is subject to validation)".
	3.10.2.8/ title	Acute toxicity		Aquatic toxicity
	3.10.2.11.2	…materials is being developed and will be covered further in the special guidance.		...materials is included in Annex 9. This protocol is undergoing validation testing under the auspices of the OECD.
	3.10.2.13	Third sentence: "Validity may be judged according to …...project."		deleted
	Figure 3.10.2			In the column "Classify", "hazard" inserted after "toxicity" everywhere
	3.10.3.3.2			Last two bullets: "hazard" inserted after "toxicity"
	3.10.3.5.2	Second sentence:"….mixture an acute category which…"		Second sentence:"….mixture an acute hazard category which…"
	3.10.3.5.2	n= number of components		n= number of components, and i is running from 1 to n.
	Decision Logic 3.10.1	First block on the right: "Classification not possible"		First block on the right: "Value for the L(E)C50 of the mixture from Decision Logic 3.10.2"
	Annexes			
A1		Note in respiratory sensitization		deleted
		Note in skin sensitization		deleted
A2	A2.19	Severe eye damage/irritation		serious eye damage/irritation
A4	A4.1.4	For instance, acute and physical...labelling is based on risk.		"However, acute and physical... on risk is not indicated.
	A4.1.5	While intrinsic hazards of a chemical …		While intrinsic hazards of a chemical...
	A4.2.2.1	...(e.g. safety data sheets, shipping papers) …		...(e.g. safety data sheets, transport documents)…
	A5.1	This instrument has been developed by a multidisciplinary….The tool aims to provide a methodology for the assessment		This instrument aims to provide a methodology for the assessment... /rest of information put as a footnote
	A6.1.1 and A6.1.1	Label for large container (200 litre drum)...		Label for large receptacle (200 litre drum)...
	A6.1.2 and A6.2.2	Label for small workplace container (10 litre) packaged inside an outer shipping container-..		Label for small workplace receptacle (10 litre) packaged inside an outer transport packaging-..
	A6.1.3 and A6.2.3	Outer shipping container has UN transport markings and label only-…		UN transport markings and labels for the outer packaging of a “combined” transport packaging containing receptacles – …
	A.6.1.3 and A6.2.3			New note *Note: Only the UN transport markings and labels are required for such outer packagings*.
A8		Definition list		incorporated into chapter 3.10 definitions
	A8.1.1			First, second, third and fifth sentences deleted:
	A8.1.4			Fourth sentence deleted.
	A8.1.4	former para 5		deleted
	Appendix	Appendix on "Harmonized system for the classification of chemical substances which are toxic for the aquatic environment"		Deleted as it fully duplicated the content of chapter 3.10
		Tests and reference lists inserted at the end of each part of A8		Test and reference lists regrouped and consolidated at the end of A8.
A9	Foreword			Deleted