Outcome of the UN GHS Sub-Committee 019/2020 Biennium

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SCHC
Fall 2021

Outcome of the UN GHS Sub-Committee 2019/2020 Biennium

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OSHA Occupational Safety and Health Administration

Overview

- UN Sub-Committee Update
  - 2019/2020 Biennium update
  - 2021/2022 Biennium Program of Work
  - Structure of the next Sub-Committee meeting

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UN Sub-Committee

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Un Sub-Committee Meeting

- December 2020 - 39th session
  - UN sub-Committee adopted the following
    - Confirmed decision taken in 2019
    - Finalizing (to the extent possible) proposals for the 39th session
    - Program of work for the 2021/22 biennium
    - Election of officers

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2019-2020 Biennium Program of work

- Review of Chapter 2.1 (Explosives) of the GHS
- Use of non-animal testing methods for classification of health hazards
- Practical classification issues
- Aspiration hazard
- Nanomaterials
- Simultaneous classification in physical hazard classes and precedence of hazards
- Practical labeling issues
- Chemical Lists
- Improvement of Annexes 1 to 3 and further rationalization of precautionary statements
- Review of Annex 4, sub-section A4.3.3.2.3

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Basis for updating the Chapter 2.1

- (a) Substances, mixtures and articles that have explosive properties but escape classification as explosives due to their transport packaging.
- (b) Substances, mixtures and articles where the GHS-classification is different when removed from of the transport packaging.
- (c) Substances, mixtures and articles that are not packaged for transport.

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Chapter 2.1 Update

Programme of Work 2019-2020

Item	Task
1	Finalise the criteria for the new system
2	Assign appropriate hazard communication elements and Precautionary statements
3	Draft a new GHS Chapter 2.1 and review the Manual for associated amendments needed
4	Propose a new Chapter 2.1 for inclusion in the 9:th revised edition of the GHS, and the associated changes to the Manual

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Update to the Criteria Category 1

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.

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Update in the Criteria

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].

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Updated Labeling

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*

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Practical Classification Issues

- Five additional examples ready for sub-Committee adoption
  - Example 1: illustrates the criteria in 3.8.1.1 and 3.8.1.6 that a substance should not be classified into the specific target organ toxicity - single exposure hazard class when the target organ effect(s), following a single exposure, are serious adverse health effects (i.e., lethality) meeting the acute toxicity hazard classification criteria.
  - Example 2: illustrates the criteria in 3.8.1.1 and 3.8.1.6 when a substance can be classified into both the Specific Target Organ Toxicity – Single Exposure hazard class, for non-lethal effects, and Acute Toxicity hazard class, for lethal effects.
  - Example 3: illustrates the criteria in 3.9.1.1 and 3.9.1.6 that a substance can be classified into both Specific Target Organ Toxicity – Repeated Exposure hazard class, for non-lethal effects, and into the Acute Toxicity hazard class, for lethal effects.
  - Example 4: illustrates the criteria in 3.9.1.1 and 3.9.1.6 that a substance can be classified into both specific target organ toxicity – repeated exposure hazard class, for non-lethal effects, and into the acute toxicity hazard class, for lethal effects.
  - Example 5: illustrates the interpretation of the criteria in 3.9.1.1 and 3.9.1.6 and 3.8.1.1 and 3.8.1.6 regarding simultaneous classification into specific target organ toxicity – repeated exposure hazard class, specific target organ toxicity – single exposure hazard class and into the acute toxicity hazard class, for lethal effects or not.

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Practical classification Issues

- All five examples were adopted by the Sub-Committee with minor edits.
- The examples are now posted on the GHS
  - https://unece.org/transportdangerous-goods/ghs-guidance
- Please note that example 3 and 4 are different (different sets of data)

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Annex 1 to 3

- Corrections and updates to Annex 1
- Proposed changes to Annex 3 to prevent substances/mixtures classified as causing serious eye damage or eye irritation being transferred from the hand to the eye
  - focus area (a): “to develop proposals to rationalise and improve the comprehensibility of hazard and precautionary statements for users, while taking into account usability for labelling practitioners.”
- Corrections and amendments to Annex 3, sections 2 and 3

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Annex 1 to 3

- The Sub-Committee reviewed the Model Regulation pictograms and notes in Annex 1 of the GHS to remove inconsistencies, provide greater clarity and improve the readability and presentation of the tables.

  – Corrected errors and inconsistencies in the tables and notes
  – Corrected the display of Model regulations pictograms
  – Improve d the Accuracy of the labeling information – inclusion of additional Model Regulation pictograms

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Example Annex 1

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

Classification					Labelling				
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	GHS Hazard statement codes
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* ~~*Not required*~~	Warning		

[a] ~~*Under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, the symbol, number and border line may be shown in black instead of white. The background colour stays red in both cases.*~~ *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.*

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Updates to Annex 1 to 3

Code	Precautionary statement	Hazard Class	Hazard Category	Conditions of Use
264	Added [and…] "Wash hands [and…]… thoroughly after handling	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
265	Do not touch eyes	Serious Eye Damage (Chapter 3.3) Eye Irritation (Chapter 3.3)	1 2/2A, 2B	

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Non- Animal Testing

- Workstream 1
  - To review and revise Chapter 3.3, Serious Eye Damage, Eye Irritation, following as appropriate the work already done on Chapter 3.2.
  - Specific issue of classification using pH
- Workstream 2
  - To review and revise Chapter 3.4 in regard to skin sensitisation.
- Workstream 3
  - To consider whether updates are needed in Chapter 1.3 as a result of the group's work.

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Non Animal Testing update

- No decision was taken on updates to Chapter 3.3 for Revision 9.
  - However the Sub-Committee adopted the revisions in July 2021

- Notable changes for chapter 3.3 (Revision 10)
  - The chapter was updated to maintain alignment with the previous revisions in Chapter 3.2
  - It's the first chapter that includes Defined Approach methods as part of the classification process.
  - We've clarified the outstanding pH issue left over from our discussions on Chapter 3.2.

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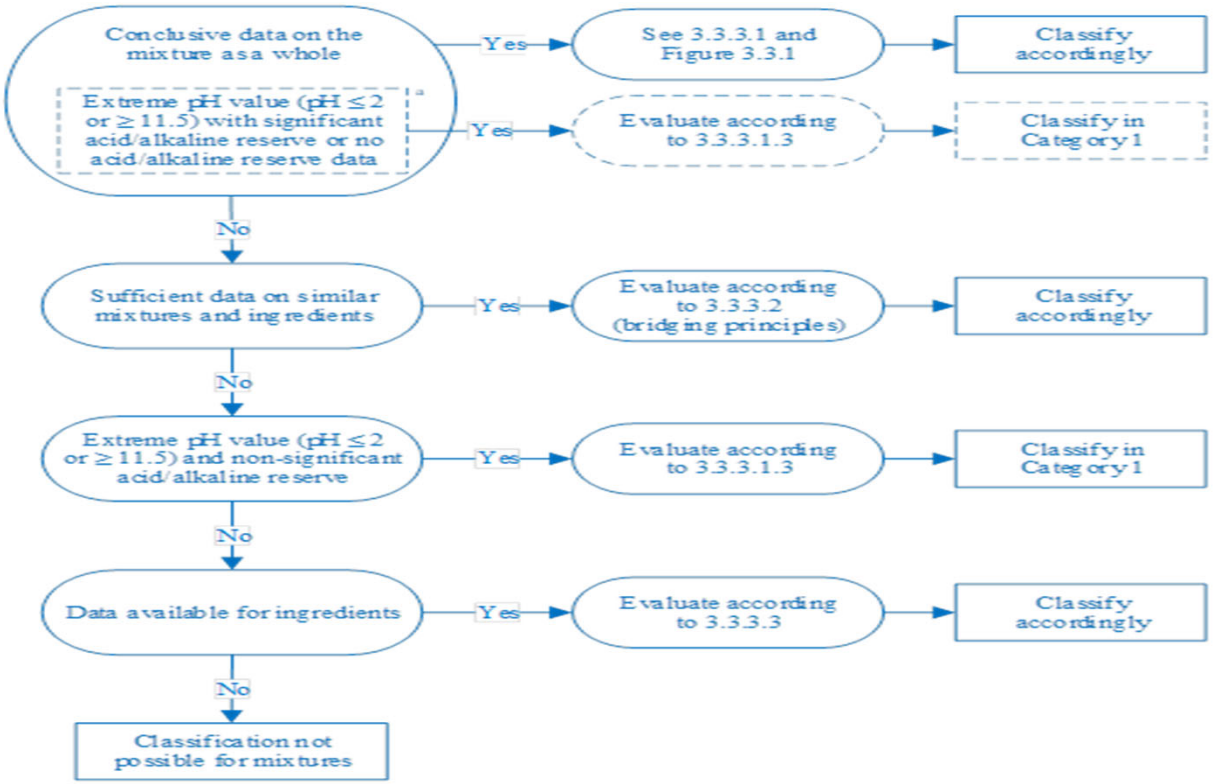
Tiered approach to classification of mixtures



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Other proposals Adopted

- Physical Hazard Definitions
  - This Chapter provides definitions and abbreviations of general applicability that are used ~~throughout~~ in the GHS. Additional definitions of the individual hazard classes and related terms are presented in the relevant chapters.
- Decision Logics
  - During the informal consultations held in July in preparation of the December session, some delegations proposed minor amendments to the current text of the decision logics and corrections to mistakes unintentionally introduced in document ST/SG/AC.10/C.4/2020/3.

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Other Proposals Adopted

- Update to 4.1.3.3.4 in the GHS
  - (a)(ii)Classify the mixture as Chronic 1 or, 2 ~~or 3~~ in all other cases in accordance with Table 4.1.1 (b)(i) (non-rapidly degradable);

- Workplace labelling: clarification of 1.4.10.5.5.1

Option 3 (b):

- "Decanted chemicals intended for immediate use could be labelled with the ~~components~~ **product identifier** and directly refer the user to the supplier label information and SDS."

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2021/2022 Biennium Program of work

- non-animal testing methods for classification of health hazards
- Classification of skin sensitizers using the results of local lymph node assays (LLNA) test methods in accordance with OECD Test Guideline 442B
- Classification criteria for germ cell mutagenicity
- Practical classification issues
- Nanomaterials
- Simultaneous classification in physical hazard classes and precedence of hazards
- Practical labelling issues
- Improvement of Annexes 1 to 3 and further rationalization of precautionary statements
- Assessing the possible development of a list of chemicals classified in accordance with the GHS
- Alignment of guidance in Annex 9 (section A9.7) and Annex 10 of the GHS with the criteria in Chapter 4.1

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UN Sub-Committee

- Program of Work
  - December 2020 Report pages 20-22
  - https://unece.org/sites/default/files/2021-01/ST-SG-AC10-C4-78e_0.pdf
  - Link to UN website
  - https://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html
- Next UN meeting: December 8 -10

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