Recent GHS Sub-Committee Activities

Discussion Topics

- Three major Working Papers from the July 2023 Session
  - Revision of Example 1 to 7 in Annex 7
  - Revision of Chapter 4.2 (Hazardous to the Ozone Layer) to include classification and hazard communication for greenhouse gasses
  - Mandate to the Organization for Economic Co-operation and Development (OECD) on Endocrine Disruptors
- 2023 Program of Work

Revision of Examples 1 to 7 in Annex 7

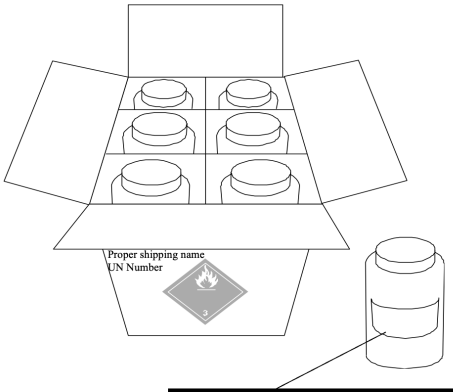
Examples 1 to 7 in Annex 7

- These examples illustrate the allocation of label elements on single package (i.e., drum) and combination packing (i.e., outer box with inner bottle).
- The updates in ST/SG/AC.10/C.5/2003/5 are only editorial in nature and were based on the following guiding principles:
  - Keep the existing layout,
  - Delete explicit chemical names and only refer to “Product Identifier (see 1.4.10.5.2 (d))” for GHS labels and “UN number” and “Proper Shipping Name” for transport information,
  - Introduce reference to 1.4.10.4 for transport “labels”,
  - Keep GHS pictograms smaller in size compared to transport labels,
  - Use a consistent format for GHS Classification (i.e., Hazard Class; Category).

Example 1: New vs. Old

"Example 1: Combination packaging for a chemical with the classification: Flammable liquid, Category 2

Outer packaging: Box with a flammable liquid transport label*
Inner packaging: Plastic bottle with GHS label



Product identification (see 1.4.10.5.2 (d))

SIGNAL WORD (see 1.4.10.5.2 (a))

Hazard statements (see 1.4.10.5.2 (b))

Precautionary statements (see 1.4.10.5.2 (c)) and annex 3 sections 2 and 3)

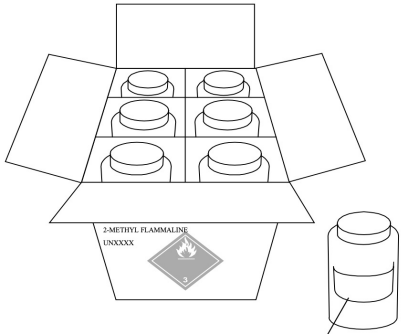
Supplemental information as allowed or required by the competent authority as appropriate (see 1.4.10.5.4.2).

Supplier identification (see 1.4.10.5.2 (e))

* *Only the transport markings and labels as specified in the UN Model Regulations are required for outer packagings.".*

Example 1: Combination packaging for a Category 2 flammable liquid

Outer packaging: Box with a flammable liquid transport label*
Inner packaging: Plastic bottle with GHS hazard warning label**



2-METHYL FLAMMALINE

Product identifier (see 1.4.10.5.2 (d))

SIGNAL WORD (see 1.4.10.5.2 (a))

Hazard statements (see 1.4.10.5.2 (b))

Precautionary statements (see 1.4.10.5.2 (c))

Additional information as required by the competent authority as appropriate.

Supplier identification (see 1.4.10.5.2 (e))

* *Only the UN transport markings and labels are required for outer packagings.*

** *A flammable liquid pictogram as specified in the "UN Model Regulations" may be used in place of the GHS pictogram shown on the inner packaging label.*

Revision of Chapter 4.2 to include classification and hazard communication for greenhouse gasses

Existing Chapter 4.2

- The “Kigali amendment” (Annex F) to the Montreal Protocol is only focused on hydrofluorocarbon gases with a Global Warming Potential (GWP).

Annex F: Controlled substances

Group	Substance	100-Year Global Warming Potential
Group I		
CHF_2CHF_2	HFC-134	1 100
CH_2FCF_3	HFC-134a	1 430
CH_2FCHF_2	HFC-143	353
$CHF_2CH_2CF_3$	HFC-245fa	1 030
$CF_3CH_2CF_2CH_3$	HFC-365mfc	794

- However, existing GHS criteria results in classification as Hazardous to the Ozone Layer.

Category	Criteria
1	Any of the controlled substances listed in Annexes to the Montreal Protocol; or Any mixture containing at least one ingredient listed in the Annexes to the Montreal Protocol, at a concentration ≥ 0.1%

Additional Consideration

- Some substances only have an Ozone Depleting Potential (ODP) and others have both an ODP and a Global Warming Potential (GWP). For example:

Annex A: Controlled substances

Group	Substance	Ozone-Depleting Potential*	100-Year Global Warming Potential
Group I			
$CFCl_3$	(CFC-11)	1.0	4 750
CF_2Cl_2	(CFC-12)	1.0	10 900
$C_2F_3Cl_3$	(CFC-113)	0.8	6 130
$C_2F_4Cl_2$	(CFC-114)	1.0	10 000
C_2F_5Cl	(CFC-115)	0.6	7 370
Group II			
CF_2BrCl	(halon-1211)	3.0	
CF_3Br	(halon-1301)	10.0	
$C_2F_4Br_2$	(halon-2402)	6.0	

- So, the chapter needed to take all possible combinations into consideration.

Updated Chapter 4.2

- Working Paper ST/SG/AC.10/C.4/2023/4 updates Chapter 4.2 as follows:
  - New name: "Hazardous to the Atmospheric System"
  - New definition for Global Warming Potential
  - Updated criteria for Hazardous to the Ozone Layer

Category	Criteria
1	Any of the controlled substances listed with an ozone depleting potential in annexes to the Montreal Protocol; or Any mixture containing at least one ingredient listed in with an ozone depleting potential in the annexes to the Montreal Protocol, at a concentration ≥ 0.1 %

  - Addition of new Hazard Class "Hazardous by contributing to global warming" with the following criteria:

Category	Criteria
1	Any of the controlled substances listed with a global warming potential in annexes to the Montreal Protocol; or Any mixture containing at least one ingredient listed with a global warming potential in the annexes to the Montreal Protocol, at a concentration ≥ 0.1 %

Updated Chapter 4.2

- Working Paper ST/SG/AC.10/C.4/2023/4 updates Chapter 4.2 as follows:
  - Updated Hazard Communication

	Category 1	Category 1
	Hazardous to the ozone layer	**Hazardous by contributing to global warming**
Symbol	Exclamation mark	Exclamation mark
Signal word	Warning	Warning
Hazard statement	Harms public health and the environment by destroying ozone in the upper atmosphere	Harms public health and the environment by contributing to global warming

  - Some substances and mixtures meet the criteria for classification as hazardous to the ozone layer and hazardous by contributing to global warming. In these cases, a hazard statements for both hazard classes can be combined into single hazard statement (i.e., Harms public health and the environment by contributing to global warming and destroying ozone in the upper atmosphere.).

Potential Hazard Issues and Their Presentation in the GHS

Potential Hazard Issues and Their Presentation in the GHS

Background:

- European Commission Proposed the introduction of “unaddressed hazards” into the GHS in working paper ST/SG/AC.10/C.4/2022/18:
  - Endocrine Disruptors
  - PBT/vPvB and PMT/vPvM
  - Immunotoxicity
  - Neurotoxicity
  - Hazardous to the terrestrial environment

At the July 2023 Meeting the GHS Sub-committee approved:

- OECD Mandate on Endocrine Disruptors (ST/SG/AC.10/C.4/2023/6)
- Potential Hazards Issues Working Group Program of Work

Terms of Reference

The US and EU jointly submitted an updated Terms of Reference (UN/SCEGHS/43/INF.39) that provides more structure regarding the scope of work and outlines a stepwise approach to maintaining consistency with existing hazards and hazard classes. It specifically covers:

1. Priority Setting
2. Development of OECD Mandates for GHS Sub-committee approval
3. Placement of new hazard and criteria into the GHS
4. Classification Criteria

OECD Mandate on Endocrine Disruptors

High level summary of the OECD Mandate on Endocrine Disruptors (ST/SG/AC.10/C.4/2023/6):

1. OECD to review existing GHS hazard classes (e.g., carcinogenicity, reproductive toxicity, specific target organ toxicity and hazardous to the aquatic environment) to:
   i. Identify gaps regarding the ability to adequately classify and label substances and mixtures that have endocrine disrupting properties
   ii. Starts with knowledge of EATS pathways and then consider other endocrine pathways.
2. Following the gap analysis, assess if the WHO/IPCS (2002) definition is sufficient for the GHS and if warranted provide recommendations.
3. Based on a report from the OECD on the items above the PHI WG will decide on how to proceed taking into consideration the ToR.

2023 Program of Work

GHS Sub-Committee Program of Work for 2023-2024

- Tests for oxidizing liquids and oxidizing solids
- Use of non-animal testing methods for classification of health and environment
- Classification criteria for germ cell mutagenicity
- Practical classification issues
- Nanomaterials
- Simultaneous classification in physical hazard classes and precedence of hazards
- Potential hazard issues and their presentation in the GHS
- Practical labeling issues
- Improvement of Annexes 1 to 3 and further rationalization of precautionary statements
- Hazard communication for gases addressed in the Montreal Protocol
- Assessing the possible development of a list of chemicals classified in accordance with the GHS