UN GHS Sub-Committee Activities – An Update

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Overview

UN Subcommittee Activities

- 2013-2014 biennium: Updates In Revision 6
- Ongoing Working Group Activities for the current biennium (2015-2016)

2013-2014 Biennium

Ended December 2014 - Covered work approved during 2013 & 2014

Significant items included:

- New Hazard Class - Chapter 2.17 Desensitized Explosives
- New Hazard Category - Pyrophoric Gases hazard category was added in Flammable Gasses Hazard Class
- Comprehensive Guidance in Annex 4 for preparing Section 9 of the SDS
- “Relevant ingredients” concept incorporated for mixture calculations in STOT – Single Exposure - Category 3 and Aspiration Hazard
- Small packaging label example

Current Program of Work

Work continues on:

- Labeling of small packages
- Practical Classification Issues
- Classification of Flammable Gases
- *Dust Explosion Hazard*
- Global List
- Nanomaterials
- Precautionary Statements
- Review of Chapter 2.1 Explosives to develop guidance for workplace storage and handling

Flammable Gases

Update allows for sub-categorization of current category 1 into:

- Category 1A
- Category 1B
  - Allows classification of gases and gas mixtures with a lower burning velocity developed by the refrigeration and foam plastics industries
  - Addresses gases with a lower flammability limit greater than 6% or a fundamental burning velocity of less than 10 cm/s.

This approach does not entail any changes in classification for transport purposes.

Proposed Criteria:

Category	Criteria
1/1A	Gases, which at 20 °C and a standard pressure of 101.3 kPa: (a) are ignitable when in a mixture of 13% or less by volume in air; or (b) have a flammable range with air of at least 12 percentage points regardless of the lower flammability limit.
1B	Gases which meet the criteria of category 1/1A and which have at least either: a) A lower flammability limit of more than 6% by volume in air; or b) A fundamental burning velocity of less than 10 cm/s;
2	Gases, other than those of Category 1, which, at 20 °C and a standard pressure of 101.3 kPa, have a flammable range while mixed in air.

Working Paper: ST/SG/AC.10/C.4/2016/4

Flammable Gases

Additional issues associated with the update:

- Hazard Communication elements for the new sub-category 1B

	Flammable gas			**Additional categories**		
				Pyrophoric gas	**Chemically unstable gas**	
	Category 1/1A	**Category 1B**	**Category 2**	**Pyrophoric gas**	**Category A**	**Category B**
Symbol	Flame	[Flame]	*No symbol*	Flame	Flame	Flame
Signal word	Danger	[Danger]/ [Warning]	Warning	Danger	Danger	Danger
Hazard statement	Extremely flammable gas	[Flammable gas]/ [Highly flammable gas]	Flammable gas	Extremely flammable gas May ignite spontaneously if exposed to air	Extremely flammable gas May react explosively even in the absence of air	Extremely flammable gas May react explosively even in the absence of air at elevated pressure and/or temperature

Working Paper: ST/SG/AC.10/C.4/2016/4

Flammable Gases

Alternate Proposal from Germany, European Industrial Gases Associations (EIGA) and the European Chemical Industry Council (CEFIC)

Category	Criteria
1	Gases, which at 20 °C and a standard pressure of 101.3 kPa have a flammable range in air and which are not assigned to Category 2.~~:~~ ~~(a) are ignitable when in a mixture of 13% or less by volume in air; or~~ ~~(b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit.~~
2	Gases, ~~other than those of Category 1,~~ which, at 20 °C and a standard pressure of 101.3 kPa, have a flammable range ~~while mixed~~ in air and: (a) a lower flammability limit (LFL) > 6 % by volume in air; or (b) a fundamental burning velocity (FBV) < 10 cm/s.

NOTE 2~~1~~: *Ammonia and methyl bromide may be regarded as special cases for some regulatory purposes.*

	Flammable gas	
	Category 1	**Category 2**
Symbol	Flame	Flame ~~No symbol~~
Signal word	Danger	Warning
Hazard statement	Extremely flammable gas	Flammable gas

Working Paper: ST/SG/AC.10/C.4/2016/5

Practical Classification Issues

Working paper this session addressing updates to:

- All health hazard definitions using the following principles:

Definitions should be:

- General and neutral with respect to test guidelines and not include test guideline criteria as part of a definition.
- Clear and concise.
- Provide a clear differentiation between the “definition” and the “general considerations” text when present in a chapter.
- Make use as far as possible the existing text in the GHS.

Consistently note that the definition applies to a “substance or mixture” and avoid using the term “chemical”.

Practical Classification Issues

Examples of two working proposal definitions:

Hazard Class	Definition
Acute Toxicity	*Acute toxicity* refers to serious adverse health effects (i.e., lethality [or serious adverse health effects indicative of lethality]) occurring after a single or short-term oral, dermal or inhalation exposure to a substance or mixture.
Original:	*Acute toxicity* refers to those adverse effects occurring following oral or dermal administration of a single dose of a substance, or multiple doses given within 24 hours, or an inhalation exposure of 4 hours.
Skin Sensitization	*Skin sensitization* refers to an allergic response after skin contact with a substance or a mixture.
Original:	A *skin sensitizer* is a substance that will lead to an allergic response following skin contact.

Practical Classification Issues

Working paper this session addressing updates to:

Update GHS Table 3.1.1 as indicated:

Exposure route	**Category 1**	**Category 2**	**Category 3**	**Category 4**	**Category 5**
Oral (mg/kg bodyweight) *See notes (a) and (b)*	ATE ≤ 5	5 < ATE ≤ 50	50 <ATE ≤ 300	300< ATE ≤ 2000	5000 *See detailed criteria in Note (g)*
Dermal (mg/kg bodyweight) *See notes (a) and (b)*	ATE ≤ 50	50 < ATE ≤ 200	200< ATE ≤ 1000	1000< ATE ≤ 2000	
Gases (ppmV) *See notes (a), (b) and (c)*	ATE ≤ 100	100< ATE ≤ 500	500< ATE ≤ 2500	2500< ATE ≤ 20000	*See detailed criteria in Note (g)*
Vapours (mg/l) *See notes (a), (b), (c), (d) and (e)*	ATE ≤ 0.5	0.5 <ATE ≤ 2.0	2.0< ATE ≤ 10.0	10.0< ATE ≤ 20.0	
Dusts and Mists (mg/l) *See notes (a), (b), (c) and (f)*	ATE ≤ 0.05	0.05< ATE ≤ 0.5	0.5< ATE ≤ 1.0	1.0< ATE ≤ 5.0	

Practical Classification Issues

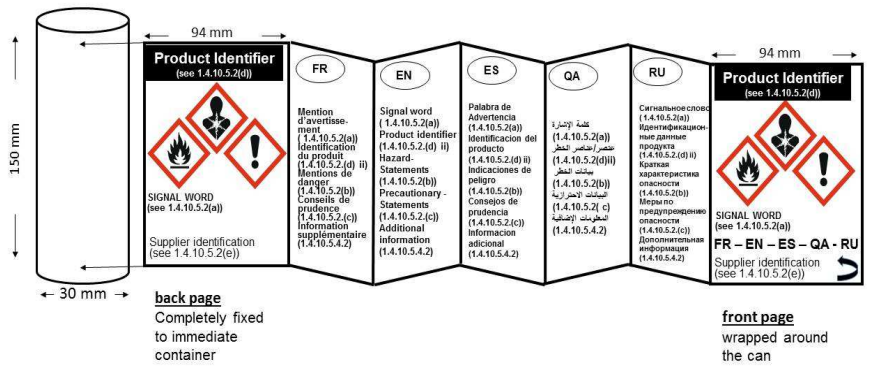
Working paper this session addressing updates to:

Update GHS Table 1.5.1 as indicated:

Hazard class	**Cut-off value/concentration limit**
Acute toxicity	≥ 1.0%
Skin corrosion/Irritation	≥ 1.0%
Serious eye damage/eye irritation	≥ 1.0%
Respiratory/Skin sensitization	≥ 0.1%
Germ cell mutagenicity (Category 1)	≥ 0.1%
Germ cell mutagenicity (Category 2)	≥ 1.0%
Carcinogenicity	≥ 0.1%
Reproductive toxicity	≥ 0.1%
Specific target organ toxicity (single exposure)	≥ 1.0%
Specific target organ toxicity (repeated exposure)	≥ 1.0%
Aspiration hazard (Category 1)	≥ 1.0% ~~≥ 10% of Category 1 ingredient(s) and kinematic viscosity ≤ 20.5 mm²/s at 40°C~~
Aspiration hazard (Category 2)	≥ 1.0% ~~≥ 10% of Category 2 ingredient(s) and kinematic viscosity ≤ 14 mm²/s at 40°C~~
Hazardous to the aquatic environment	≥ 1.0%

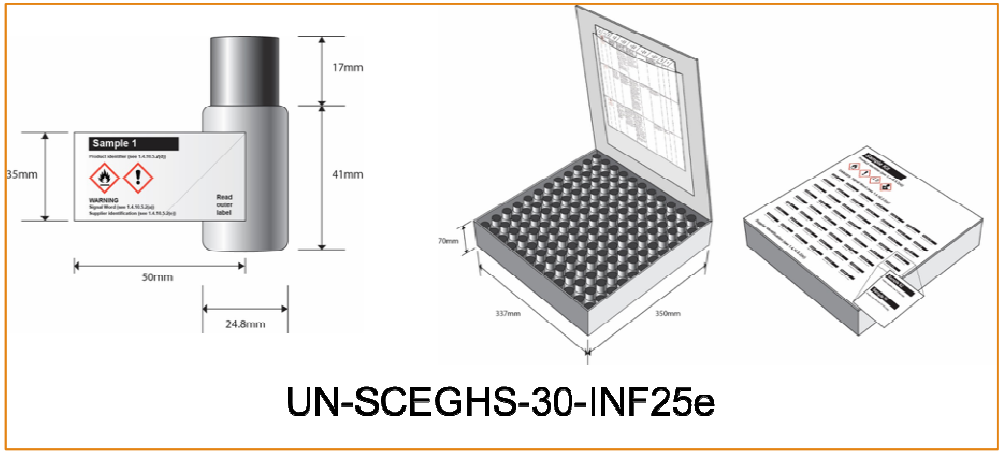
Labeling of small packagings

- Continue development of 2 examples illustrating the appropriate labeling of small packagings:
  - Multilingual fold-out labels



ST/SG/AC.10/C.4/2015/14

  - Combination packages (e.g. kit), which contain different products in small inner packagings that are too small to display a full label.



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Dust Explosion Hazard

Work stream 3:

- Start the discussion and develop an outline or work plan for guidance or a separate chapter in the GHS containing more detailed information on the conditions under which a dust explosion hazard could be encountered.

Report of the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals on its thirtieth session. Document: ST/SG/AC.10/C.4/60

- Informal correspondence working group decided to address dust explosion hazards as guidance in an annex to the GHS.
- The guidance will include:
  - Definitions;
  - Hazard identification criteria;
  - Address risk management options;
  - Provide guidance for harmonized hazard communication for those competent authorities who might wish to require it.

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