

Hazard Communication Standard and GHS Update



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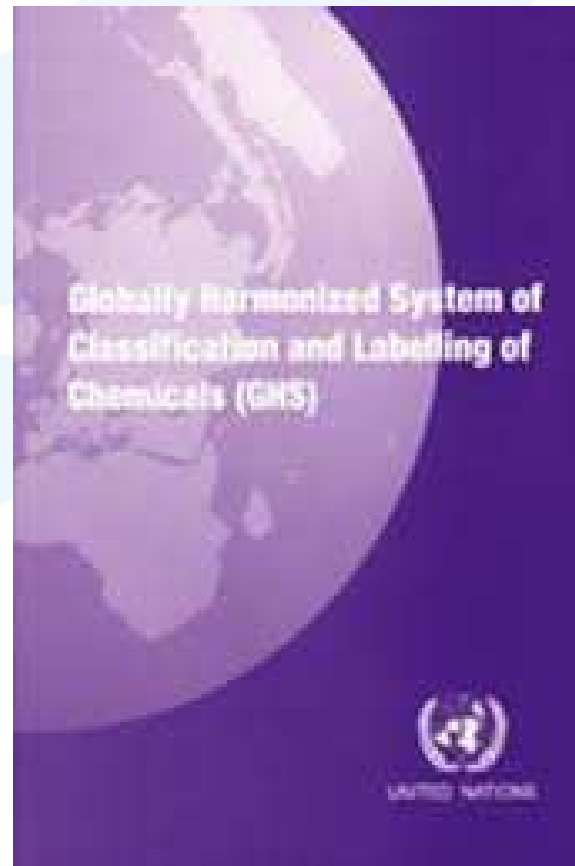


What I will cover

- Updates to the GHS Purple book
- Program of Work for the 2017-18 Biennium
- Hazard Communication Rulemaking Considerations
- Questions



Updates to the Purple Book



Updates to GHS Purple Book

- UN GHS Subcommittee completed its 2015-16 biennium in December 2016 and has complied changes for updates to the GHS
- Major updates
 - Flammable Gases
 - New example for small packages
 - Updates to precautionary statements

Flammable Gases

- It was noted that the flammable gases category 1 was extremely broad and captured essentially all flammable gases
 - In some circumstances this leads to over warning
 - Or worse – leads employers to choose a chemical with a higher risk
- The Updated Hazard class added a new subcategory:
 - Updated the Criteria to include a new subcategory 1b for flammable liquids which have a low burning velocity or high flammability limit
 - Updated the Labeling information
 - Streamlined the classification process



New Flammable Gases Criteria

Table 2.2.1: Criteria for categorisation of flammable gases

Category		Criteria
1A	Flammable gas	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. unless data shows them to meet the criteria of category 1B
	Pyrophoric gas	Flammable gases that ignite spontaneously in air at a temperature of 54 °C or below
	Chemically Unstable gas	A
B		Flammable gases which are chemically unstable at a temperature greater than 20°C and/or a pressure greater than 101.3 kPa
1B	Flammable gas	Gases which meet the flammability criteria for Category 1A, but which are not pyrophoric, nor chemically unstable, 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	Flammable gas	Gases, other than those of Category 1A or 1B, which, at 20 °C and a standard pressure of 101.3 kPa, have a flammable range while mixed in air.

Hazard Communication Elements for 1B

- Hazard communication elements for 1B flammable gases:

- Symbol:

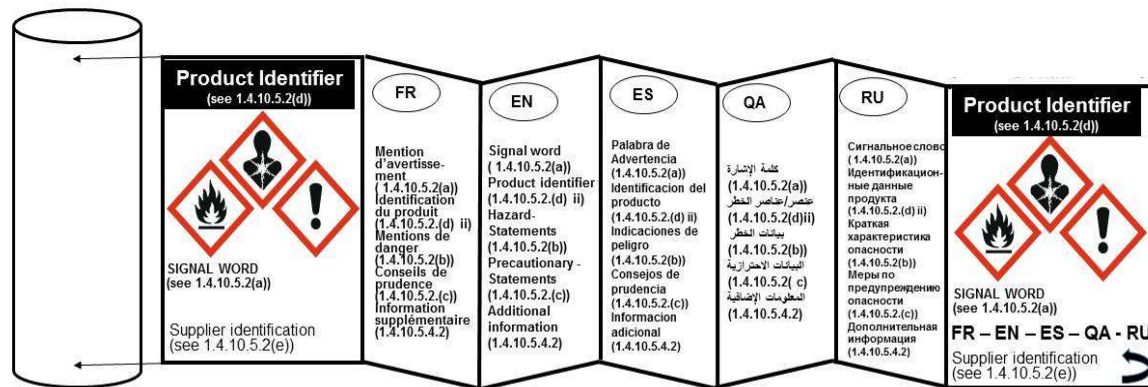


- Signal word: danger

- Hazard statement: flammable gas

Small Package Example

- This example demonstrated how one can use the use of pull out labels :



back page

Completely fixed
to immediate
container

front page

wrapped around
the can

Updates to Precautionary statements

- **Changes to Annex 3 (Hazard Statements/Precautionary Statements and Pictograms):**
 - Made a number of changes to the tables in Section 2 of Annex 3 (Codification of Precautionary Statements)
 - Added new text in Section 3 of Annex 3 (Use of Precautionary statements)
 - Restructure to improve clarity
 - Added new text under “flexibility in the use of precautionary statements”
 - Reformat “Matrix of precautionary statements by hazard class/category”



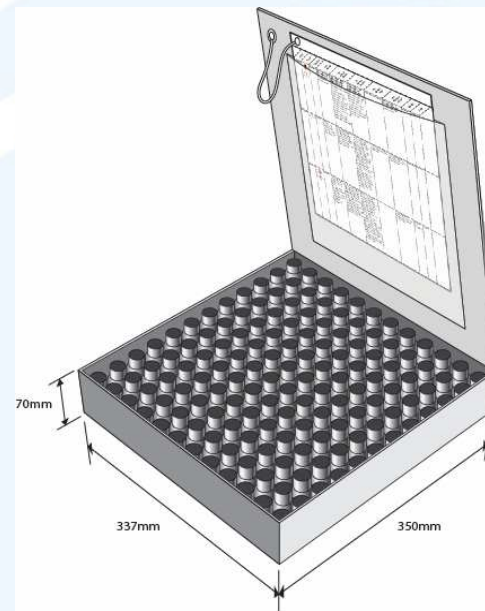
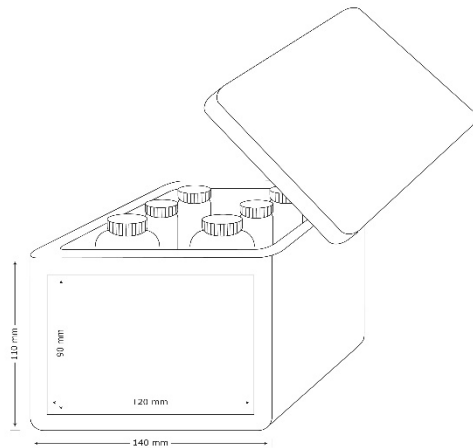
Program of work – 2017-18

Biennium

- Continuation of on going work
 - Small packages
 - Global List
 - Review of Chapter 2.1 (Explosives)
 - Dust Explosion Hazards
- New work items
 - Non animal testing
 - Chemicals under pressure

Small Packages

- Creating examples for labeling kits
 - Multiple examples illustrating how label a box that contain different small containers of hazardous chemicals



Review Chapter 2.1 (Explosives)

- (a) What are the classification and hazard communication needs for storage, manufacturing and use of explosives that are not packaged for transport?
- (b) What guidance can or should be provided in the GHS to ensure appropriate information is given to all people handling in the explosives life cycle?
- (c) If explosives are not yet, or are no longer packaged for transport, does the transport classification apply for safe storage, handling and use, including labelling of explosives? If not, can it be deduced without further testing of individual items?

Dust Explosion Hazards

- a) Workstream 1: review the existing national consensus and reference regulations developed by competent authorities, identify the common pieces of information used to communicate the hazards, and determine how and if this information is to be addressed;
- (b) Workstream 2: ensure that any information proposed to be included in section 9 of the SDS is communicated to the working group on Section 9 of Annex 4;
- (c) Workstream 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.



New items on the Program of work

- Non-animal testing

- (a) Using a step-wise approach, starting with a hazard class to be determined by the informal working group, identify and evaluate, relative to existing accepted *in vivo* test methods upon which the existing GHS classification criteria are based
- (b) For each relevant GHS hazard class and category, assess: all relevant information and determine the appropriate approach (Integrated or tiered evaluation)
- (b) Prepare draft amendments and additions to the GHS to facilitate hazard classification using non-animal methods, where appropriate and considering relevant limitations and uncertainties. They should include as appropriate classification criteria, notes, decision logic, tiered evaluation and guidance, and should take into account the needs of all sectors. The proposed changes should provide, so far as possible, a consistent approach across the different hazard classes. If appropriate, suggestions for further developments of non-animal methods should be given.
- (c) Report back to the GHS Sub-Committee as appropriate

New items on the Program of work

- Chemicals under pressure
 - *Aerosols* are different products to *chemicals under pressure*. *Aerosols* are by definition non-refillable, have limited capacity and have a relatively low permitted maximum internal pressure. Further the can construction requirements, flammability classification scheme and criteria as well as labelling provisions are different to *chemicals under pressure*.
 - The Sub-Committee agreed that classification and labelling of chemicals under pressure was an issue that needed to be addressed during the next biennium

Global List Project

- The GHS Sub-Committee is looking at the possibility of developing a global chemical classification list:
 - Help harmonize national lists
 - Provide guidance to authorities without a list
 - Avoid duplicative classification work

Global List Guiding Principles

- Classifications developed transparently
- Stakeholder input
- Based on publically available and scientifically sound data
- Substances only
- All hazard classes and categories
- Classifications to be nonbinding

Global List Pilot Project

- Purpose: To the difficulties involved and resources needed in preparing and reaching consensus on classifications of selected chemicals.
- Three chemicals:
 - (i) Dimethyltin dichloride (CAS No. 753-73-1) (ECHA)
 - (ii) Dicyclopentadiene (CAS No. 77-73-6) (Russian Federation)
 - (iii) Di-n-butyl phthalate (CAS No. 84-74-2) (USA)
- Sponsors prepared draft data assessments and classification; interested parties commented; sponsors responded to those comments; remaining issues resolved by way of teleconference
- OECD facilitated the process; all documents posted on a web site that any interested party could access



Global List Pilot Project

- Lessons learned from pilot:
 - possible to reach agreed nonbinding classifications through the process.
 - Substantial effort is required
 - 38 days per sponsor
 - 5 days per reviewer
 - 18-20 months from chemical selection to finalization
 - OECD also noted specific learnings on a number of technical issues
 - It was pointed out that one of the classifications could imply a change of packing group under the TDG



Global List Next Steps

- ECHA RAC Opinion-Japan list comparison
- Review pilot project findings with other international bodies that might be affected by classification: TDG/IMO
- Determine work plan going forward
 - Gauge interest from stakeholders
 - Are there ongoing classification efforts that can be built upon?

Preparation for HCS Update

The standard that gave workers the right to know, now gives them the right to understand



Purpose of Future HCS Rulemaking

- Maintain alignment with GHS
- Address issues identified during implementation of HCS 2012
- Identify issues of concern for those complying with WHMIS 2015



Principles & Assumptions

- As with HCS 2012, OSHA plans to modify only the provisions of the HCS that must be changed to align with the GHS
 - The basic framework of the HCS will remain the same
 - Chemical manufacturers and importers are responsible for providing information about the identities and hazards of chemicals they produce or import
 - All employers with hazardous chemicals in their workplaces are required to have a hazard communication program, and provide information to employees about their hazards and associated protective measures
- OSHA will maintain or enhance the overall current level of protection of the HCS



Maintaining Alignment with GHS

- Appendix A (health hazards): mostly editorial
- Appendix B (physical hazards):
 - Flammable gases – according to GHS Rev 6 & 7
 - Desensitized explosives
 - Aerosols – align with GHS Rev 6/7, include Category 3
- Appendix C (label elements)
 - New or updated hazards, updated guidance, and precautionary statements
- Appendix D (SDS)
 - Updates to SDS Sections 2, 5, 7, 9



Implementation Issues

- Hazard classification Issues
 - Health Hazards; Physical Hazards; Hazards not otherwise classified or Mixtures/cut-off values
- OSHA has provided guidance on labeling
 - Guidance versus Regulatory actions
 - Small packages; Kits; OSHA versus other Jurisdictions and Timing of updating labels
 - Example: How would a change to the (f)(11) provision requiring labels to be updated within six months affect your industry/company?
- Safety Data Sheet
- Other Jurisdictions
- Alignment with Canada



Questions to consider

- How the change will effect your company or Industry?
- What are the burdens your industry/company expects?
- Please provide information on potential feasibility issues
 - Technical – can not physically be done
 - Financial
 - Please provide examples/costs associated with issues



Questions?



OSHA Information

Websites:

- HCS 2012 Webpage

<http://www.osha.gov/dsg/hazcom/index.html>

Contact information:

- 202-693-1950

