2019 Annual Labelmaster
Dangerous Goods
Symposium
GHS & Hazard
Communication Update
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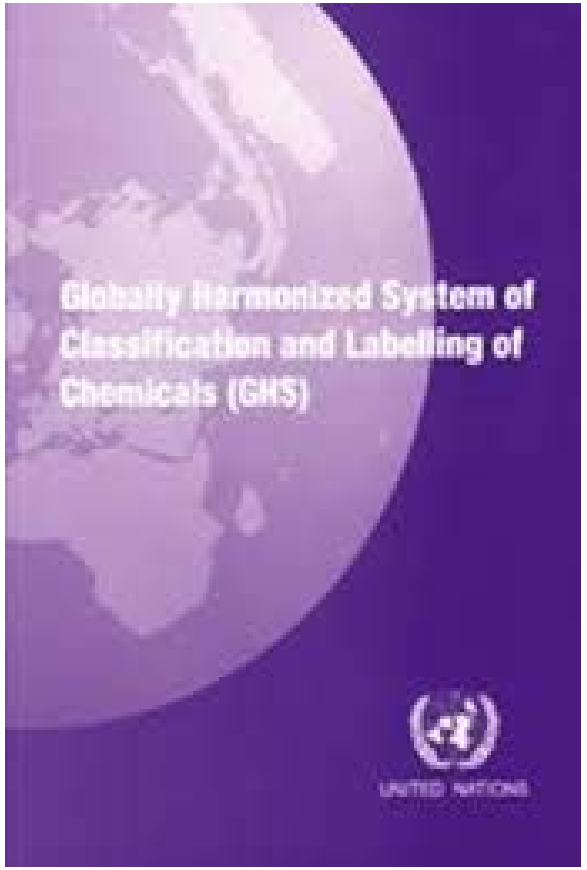
With Special Thanks to:

What I Will Cover

- Updates to the Purple book from the 2017-18 Biennium
- RCC Update
- Hazard Communication Rulemaking Considerations
- Questions

Updates to the Purple Book

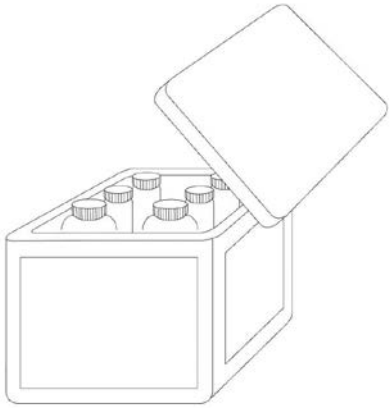


2017-18 Biennium

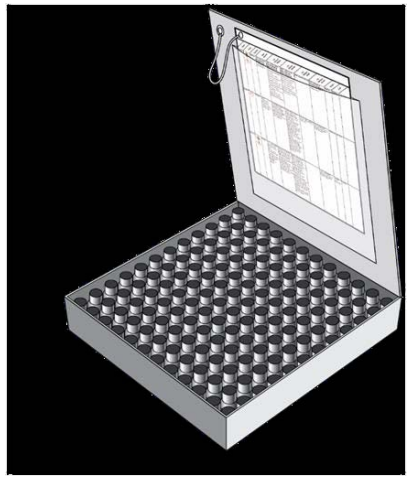
- Finalization
  - Small packages examples
  - Dust Explosion Hazards Annex
  - Non animal testing (Skin corrosion/irritation) chapter update
  - Annex 1 to 3 updates
  - PCI updates
- Significant Discussion
  - Chemicals under pressure
  - Review of Chapter 2.1 (Explosives)

Small Packages

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

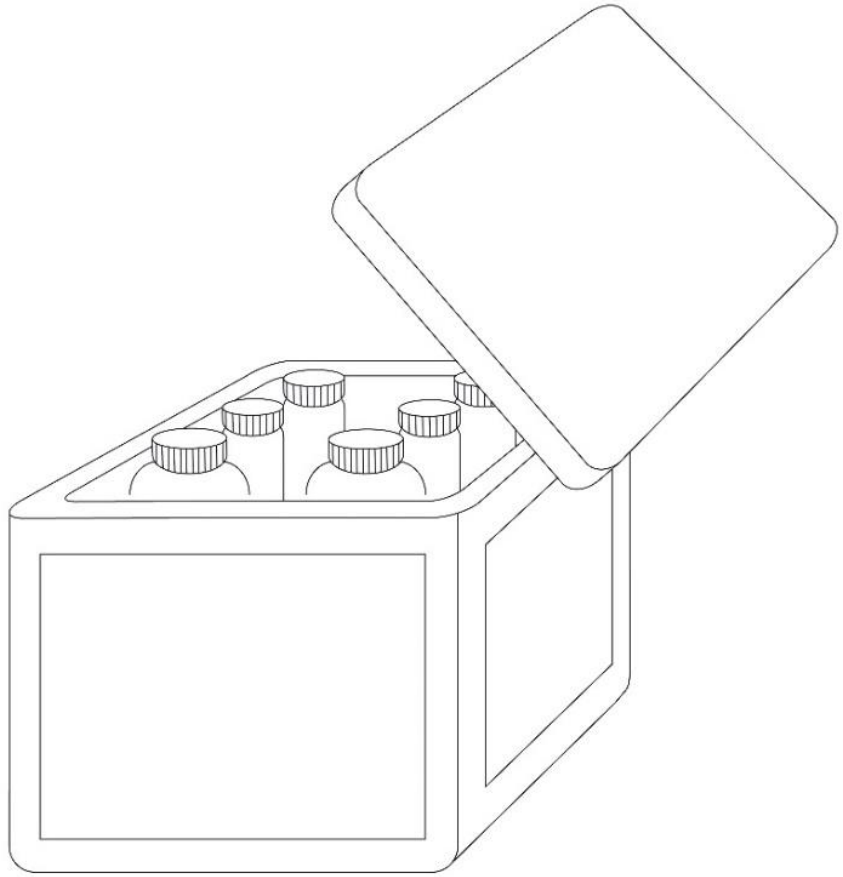


Scenario A

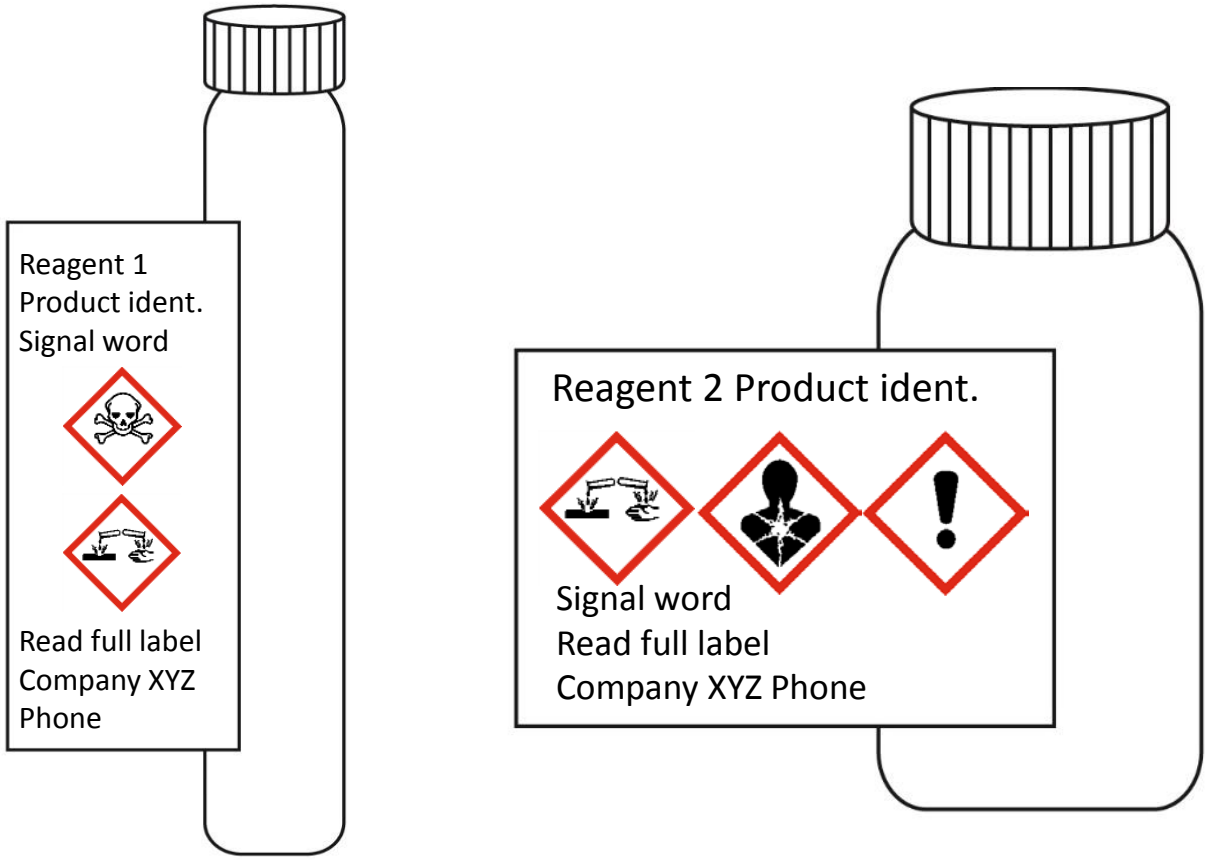


Scenario B

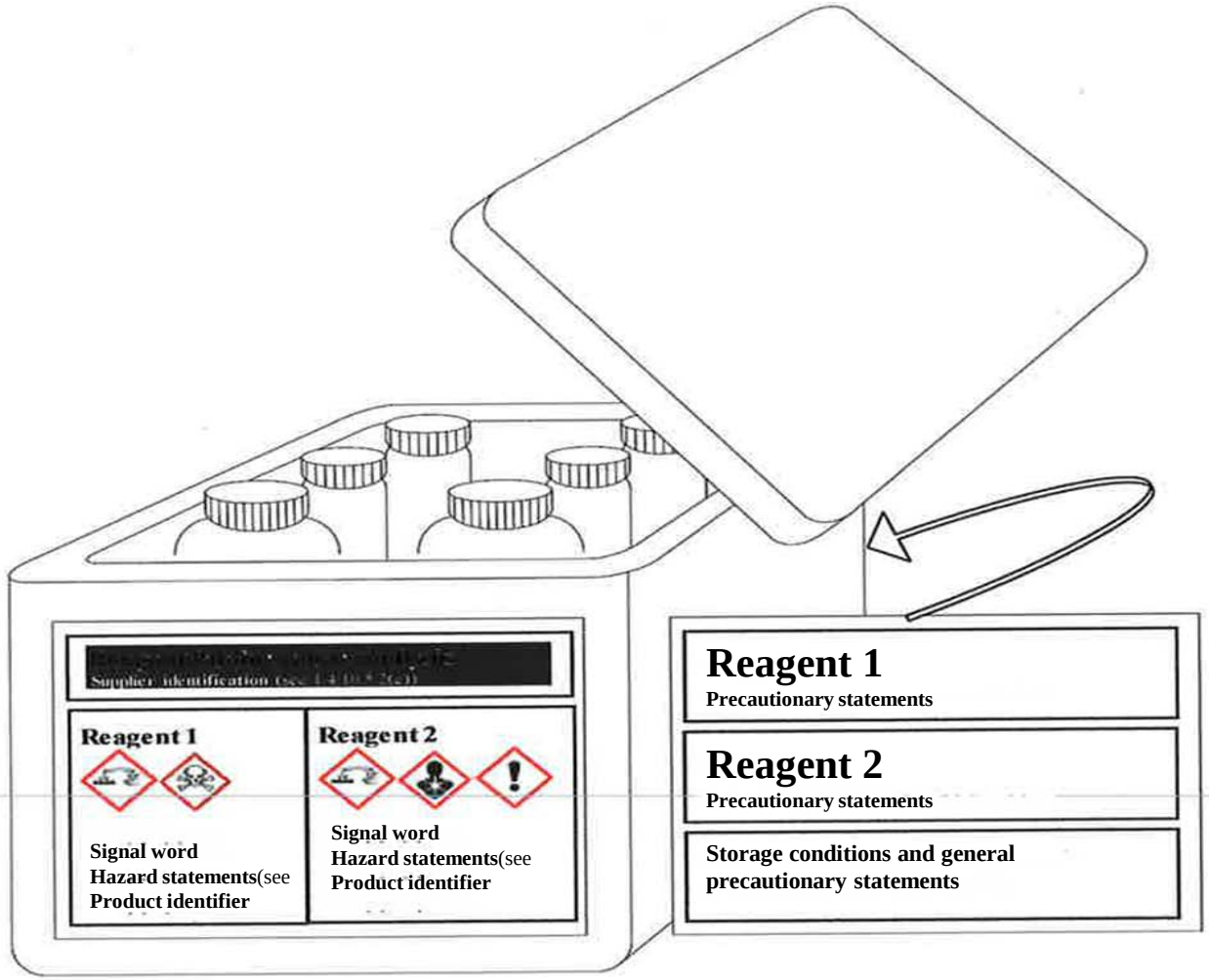
New Example 10
Scenario A



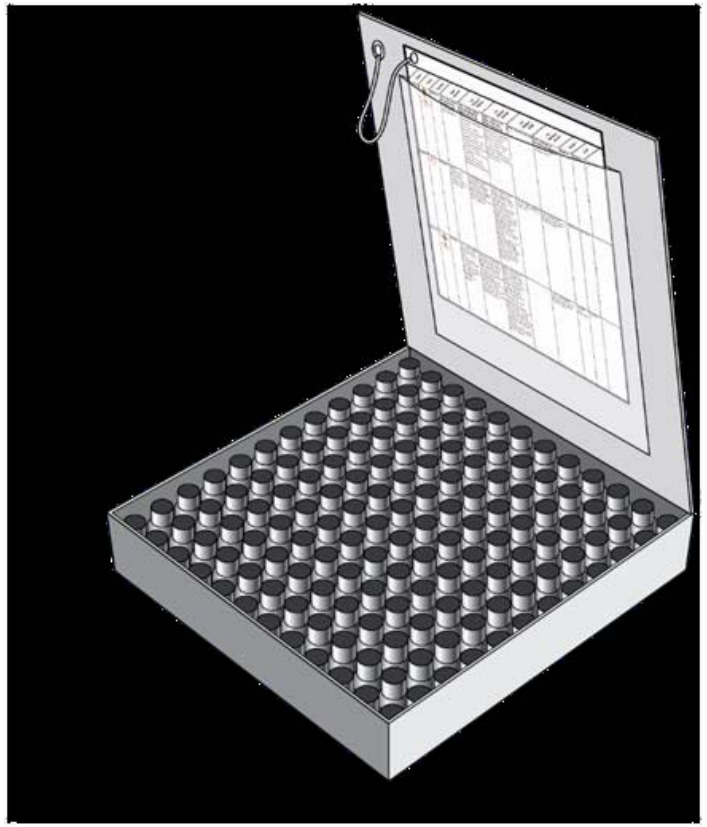
Example 10 –Scenario A
Inner containers



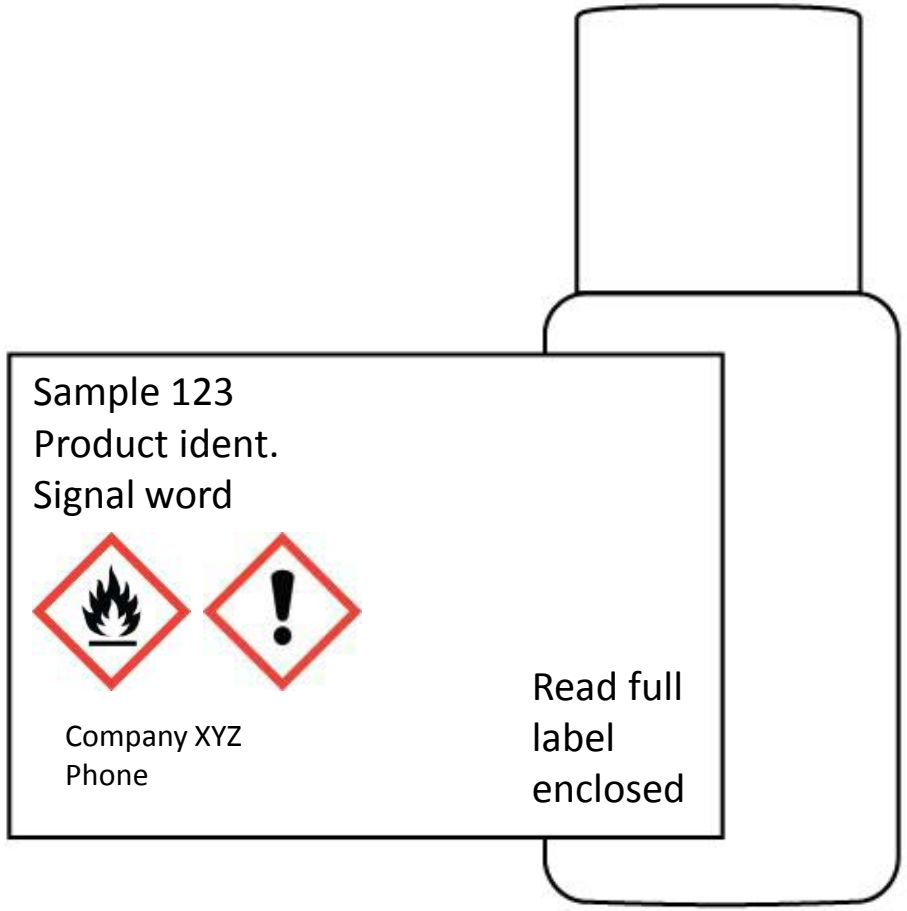
Example 10 - Scenario A
Outer Package Label



Example 10
Scenario A



Example 10 – Scenario B
Inner Container



Example 10 – Scenario B
Full Label information

Product Ident.	Pictogram(s)	Signal word	Hazard Statement	Precautionary statement	Supplemental information
123		Warning	Flammable liquid and vapor. Causes skin irritation.	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof equipment . Use non-sparking tools. Take action to prevent static discharge.	

Scenario B
Outer Package Label

MARKET KIT

Product Ident.
Signal Word

Precautionary Storage Statement(s)

Read full label enclosed

Supplier identification

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.

Dust Explosion Hazards
New Annex 11

- Section 2.2. Definitions
- Section 2.3 Identification of combustible dust
- Section 2.3 Factors contributing to dust explosions
- Section 2.5 Other factors impacting the severity of a dust explosion
- Section 2.6 Hazard Prevention, risk assessment and risk mitigation
- Section 2.7 Supplemental information for hazard and risk communication
- Section 2.8 References

Non Animal Testing

Terms of reference (Scope of work)

(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)

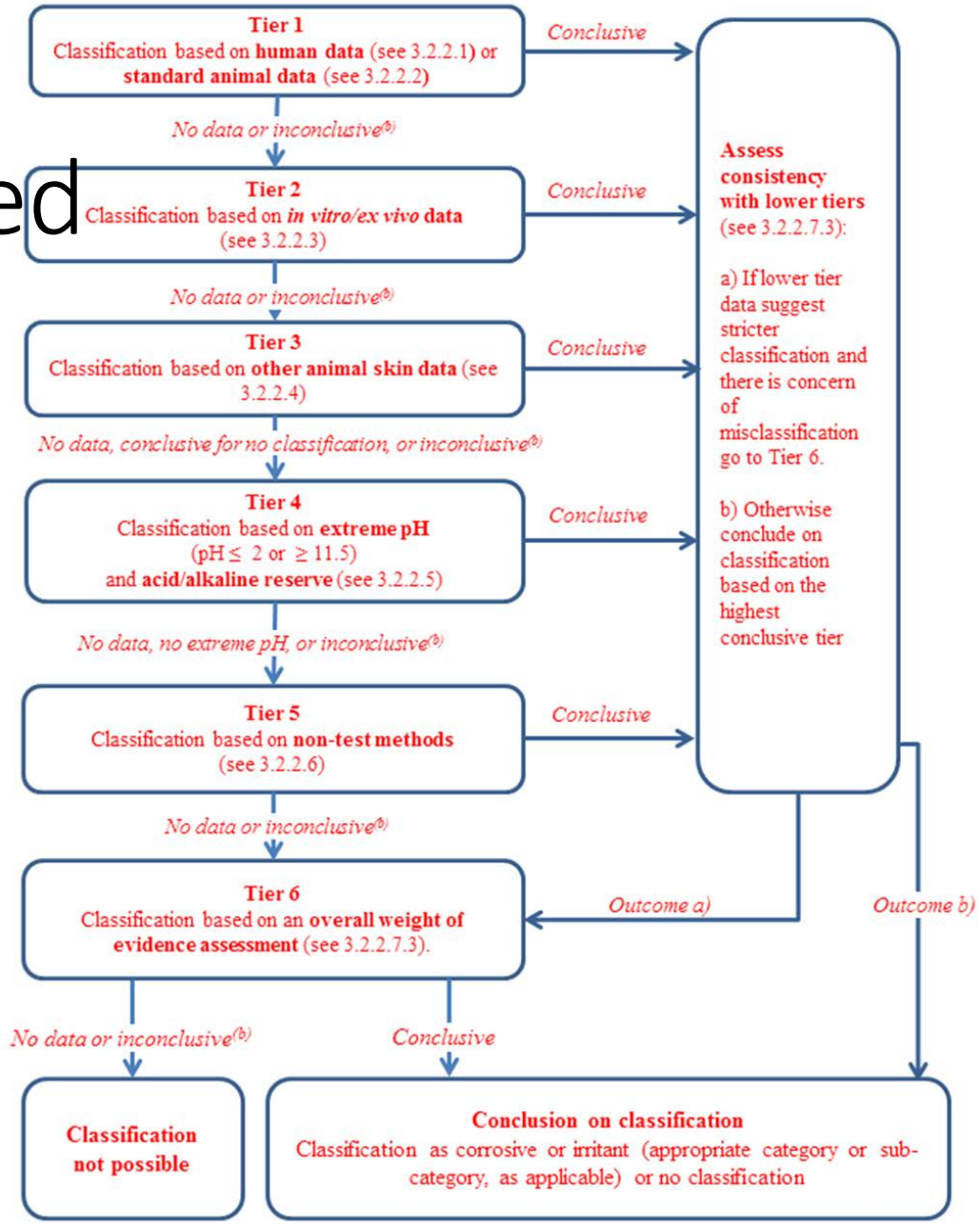
(b) Prepare draft amendments and additions to the GHS to facilitate hazard classification using non-animal methods, where appropriate and considering relevant limitations and uncertainties. They should include as appropriate classification criteria, notes, decision logic, tiered evaluation and guidance, 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

Non Animal Testing
Skin corrosion/irritation

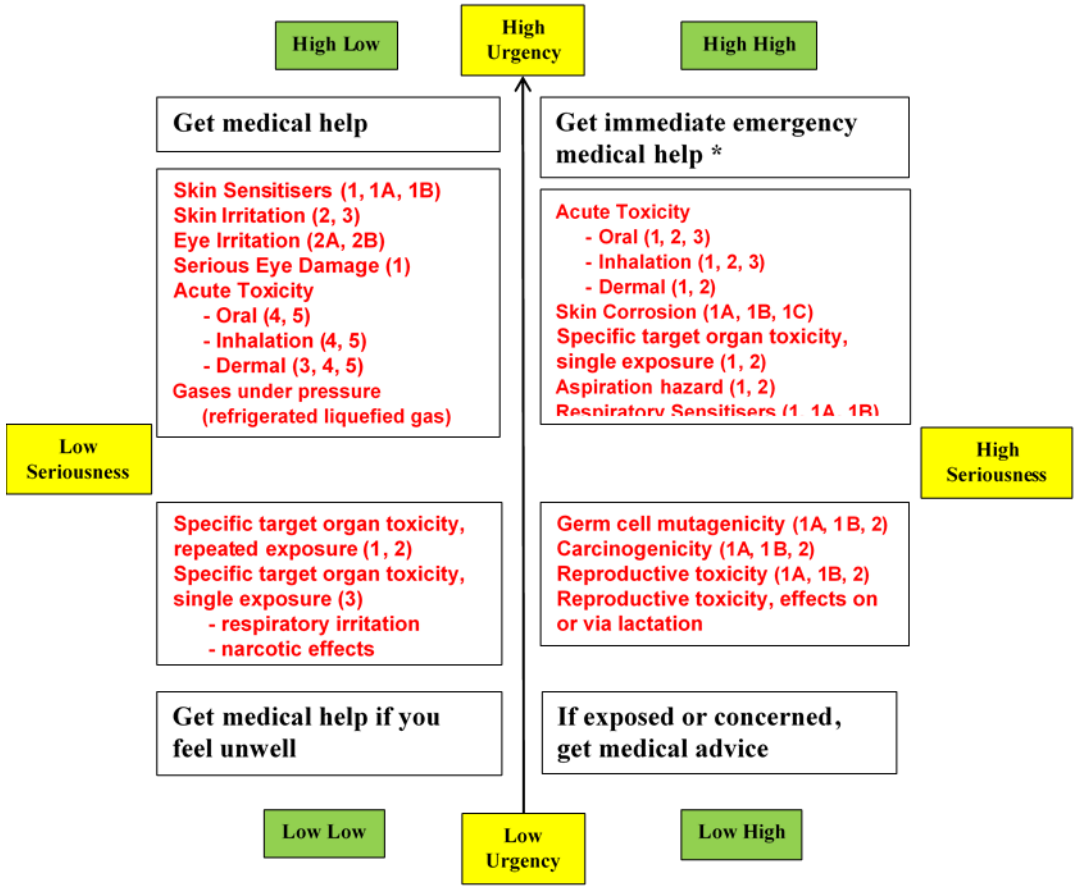
- Subcommittee is updating the chapter to facilitate hazard classification using non-animal methods.
- Major issue discussed: tiered approach versus weight of evidence approach
  - Final decision: keep tiered approach
- Changes
  - Switched the order of *in vitro/ex vivo (test tube/experimentation or measurements done in or on tissue from an organism in an external environment)* with minimal alteration of natural conditions, and other animal skin data
  - Provide guidance on when to use weight of evidence or consideration of other data
  - Provides guidance on how to use human data for classification

Draft New Tiered Approach Flowchart



Improvements to Annex 1 to 3 Medical Statements

Figure 1



Improvements to Annex 1 to 3
P201 and P202

- P201, **“Obtain special instructions before use”** and P202, **“Do not handle until all safety precautions have been read and understood”**, both aim to draw attention to the particular importance of safety precautions where high hazard chemicals are handled and used.
- The hazard classes and categories where P201 and P202 apply are similar.

Change: Add new P203 to read**: “Obtain, read and follow all safety instructions before use.”**

- **Delete P201 and P202**
- **P103 can be omitted if P203 is triggered**

Practical Classification Issues
STOT – single and repeat exposure

PCI editorial updates for Specific Target Organ effects (STOT) single and repeated exposure data:

3.8.1.6 Specific target organ toxicity following a repeated exposure is classified in the GHS as described in Specific target organ toxicity – Repeated exposure (Chapter 3.9) and is therefore excluded from the present chapter. **Substances and mixtures should be classified for single and repeated dose toxicity independently.**

Other specific toxic effects, such as acute toxicity, skin corrosion/irritation, serious eye damage/eye irritation, respiratory or skin sensitization, germ cell mutagenicity, carcinogenicity, reproductive toxicity, and aspiration toxicity are assessed separately in the GHS and consequently are not included here.

3.8.3.1 Mixtures are classified using the same criteria as for substances, or alternatively as described below. As with substances, mixtures **should** be classified for specific target organ toxicity **for single and repeated exposure** (Chapter 3.9) independently.

Proposed recommendation: Delete Paragraphs 3.8.3.4.2 and 3.8.3.4.3.

Practical Classification Issues
Chapter 1.3

- Proposed recommendation: Amend paragraph 1.3.2.3.1 (b) to include a second sentence as follows:

“Bridging may also be applied when test data conclusively show that no classification is warranted;”

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?

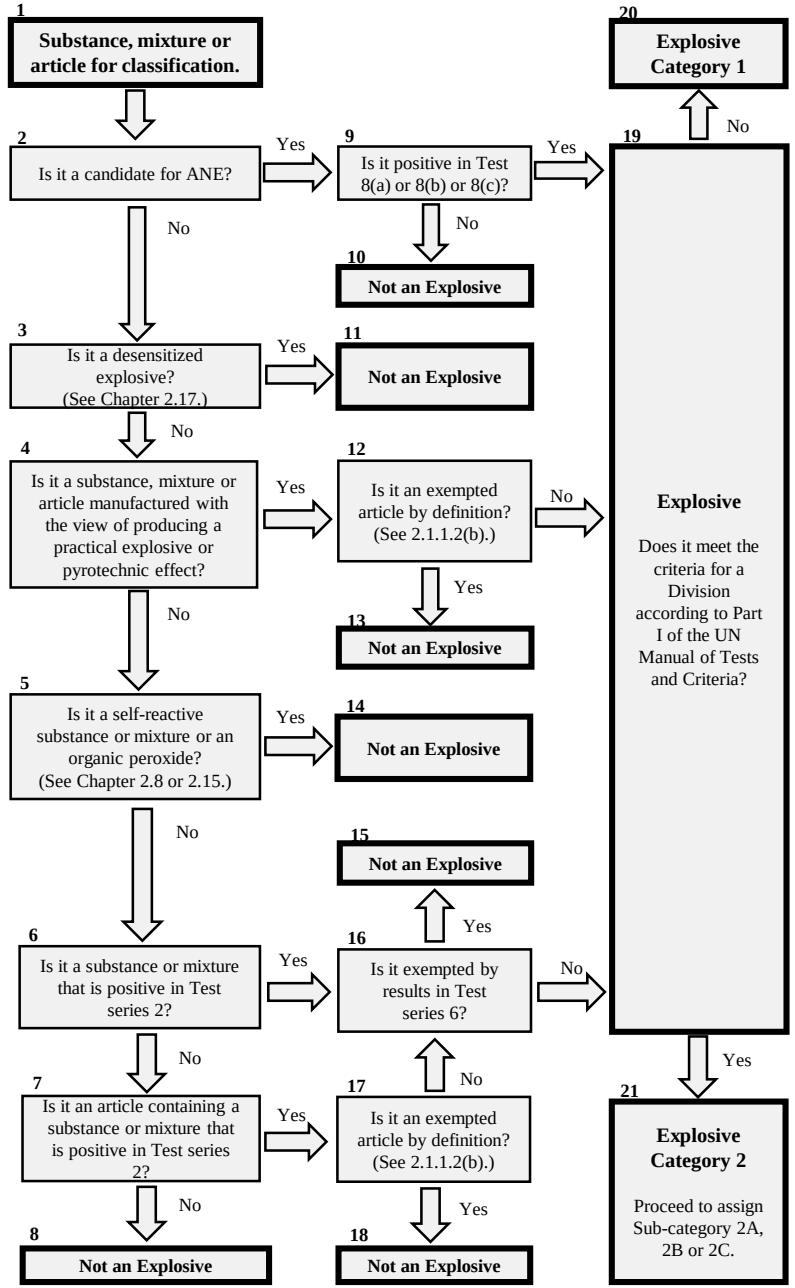
(c) If explosives are not yet, or are no longer packaged for transport, does the transport classification apply for safe storage, handling and use, including labelling of explosives? If not, can it be deduced without further testing of individual items?

Chapter 2.1
Classification update

Category	**1**	**2**		
Division	*Not applicable*	1.1,1.2,1.3,1.4,1.5 and 1.6		
Sub-Category	*Not applicable*	2A	2B	2C

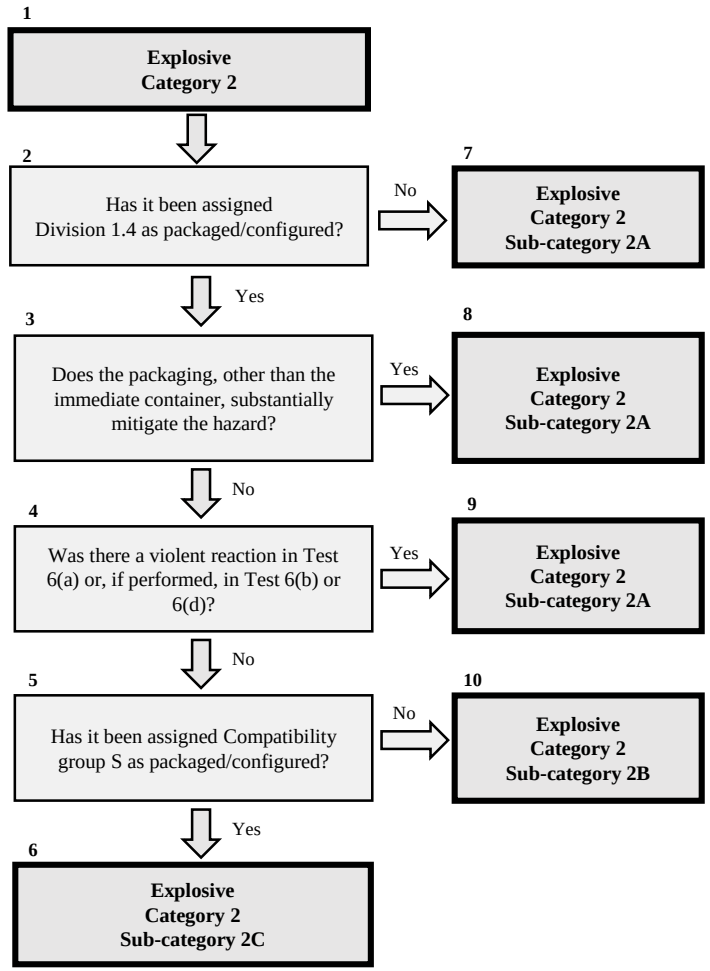
Annex 1

Proposed criteria for assigning Categories 1 and 2 in amended GHS classification system for Explosives



Annex 2

Proposed criteria for assigning Sub-categories 2A, 2B and 2C in new GHS classification system for Explosives



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*.

Program of work 2019-2020 Biennium

- Review of Chapter 2.1 (Explosives) of the GHS
- Tests for oxidizing liquids and oxidizing solids
- 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 labelling issues
- Improvement of Annexes 1 to 3 and further rationalization of precautionary statements
- Review of Annex 4, sub-section A4.3.3.2.3
- 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

RCC

Update

On June 4, 2018 the U.S. Office of Information and Regulatory Affairs (OIRA), within the White House Office of Management and Budget, and the Treasury Board of Canada Secretariat signed a Memorandum of Understanding on regulatory cooperation between the United States and Canada. The MOU reaffirms the principles and commitments of the U.S.-Canada Regulatory Cooperation Council (RCC). Through the elimination of unnecessary regulatory differences, this MOU promotes economic growth, innovation, competitiveness, and job creation.

RCC Workplace Chemical Workplan

- Develop guidance for stakeholders
  - joint guidance on label variances and alignment, descriptions of respective regulatory frameworks, HNOC guidance
- Coordinate common positions and participate in UNSCEGHS
- Maintain alignment on the implementation of the GHS

Preparation for HCS Update

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

OSHA®

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

- Align with Revision 7
- Appendix A (health hazards): mostly editorial
- Appendix B (physical hazards):
    - Flammable gases, 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

Timing

Spring 2018 Regulatory Agenda Date:

February 2019

Questions?

Websites:

- HCS 2012 Webpage
  http://www.osha.gov/dsg/hazcom/index.html

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