

The Globally Harmonized System and OSHA Hazard Communication Revision

Presented by: Denese A. Deeds, CIH
Industrial Health & Safety Consultants, Inc.
Shelton, CT

Overview

- Where are we with implementation of the OSHA Standard (Hazcom 2012)?
- Specific Issues for Aerosols.
- What are the compliance dates?
- What happens if I am not finished on time?
- OSHA vs Consumer Labeling
- Canada – WHMIS 2015

OSHA HCS 2012 Effective Dates

- The final rule was effective 60 days following publication in the Federal Register (May 25, 2012)
- Employers had to train employees of the new labels and SDS format by December 1, 2013
- Manufacturers/Importers/Distributor and Employers must comply by June 1, 2015
- Distributors cannot ship containers without compliant labels after December 1, 2015
- Employers must update hazcom program and provide additional training for new hazards by June 1, 2016

Implementation

- OSHA has issued a few interpretive letters for guidance
 - Combustible dust
 - Petroleum Streams classification
 - HNOCs
 - Employer updating MSDS to SDS
- OSHA has issued guidance to enforcement on combustible dust
 - The classifier must consider not only the hazards of the chemical in the form it is shipped, but also consider the hazards that arise under normal conditions of use and foreseeable emergencies.

Other Guidance

- OSHA has a guidance documents for industry
 - Small entity guidebook
- Pending
 - Hazard Classification Guidance
 - Compliance directive for Hazard Communication

Aerosol Classification

- OSHA Adopted Rev 3 of the GHS
- OSHA Standard states “Flammable aerosols do not fall additionally within the scope of flammable gases, flammable liquids, or flammable solids “
- Rev 4 of the GHS adds “gases under pressure”.
- Aerosols must be additionally classified as compressed gases if they meet the criteria (200 kPa/29PSI pressure) under the OSHA Standard

What About Canada

- Canada has taken the same approach as the US
 - Exclusion for Flammable Gas, Flammable Liquid and Flammable Solids (Subparts 2, 6 and 7) “Any product that is classified in a category of the hazard class “Flammable Aerosol” need not be classified in any category of this hazard class.”
 - Subpart 5: Gas Under Pressure has no exclusions
 - Therefore, aerosols that meet the pressure criteria of Gas Under Pressure must have that additional classification

OSHA / Canada GHS Classification

■ Physical Hazards

■ Flammable Aerosol

- Category 1 – Extremely Flammable

- Category 2 - Flammable

■ Gas Under Pressure

- Compressed Gas

- Other physical hazards (oxidizing, etc)

■ Health Hazards

- All that apply

GHS Revision 4 /EU CLP Classification

■ Physical Hazards

■ Aerosols

- Category 1 – Extremely Flammable
- Category 2 - Flammable
- Category 3 (non-flammable aerosol)

■ Other physical hazards (oxidizing, etc)

■ Health Hazards

■ All that apply

US/Canada GHS Aerosol Labeling

Extremely Flammable Product

DANGER Extremely Flammable Aerosol.



Contains gas under pressure; may explode if heated.

Keep away from heat, sparks, open flames, and hot surfaces. No smoking.

Do not spray on an open flame or other ignition source.

Pressurized container. Do not pierce or burn, even after use.

Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Store in a well-ventilated place

US/ Canada GHS Aerosol Labeling

Non-Flammable Product

WARNING

Contains gas under pressure; may explode if heated.

Protect from sunlight.

Store in a well-ventilated place

Optionally you can add any aerosol P phrases you want.



Aerosol Testing Issues

- Classification of aerosols is based on
 - Percent Flammable Components
 - Heat of combustion
 - Ignition Distance Test
 - Enclosed Space Ignition Test
 - Foam Aerosols
 - Flame Height and Duration
 - OSHA has a slight difference in classification based on this data

OSHA Classification

Table B.3.1: Criteria for flammable aerosols

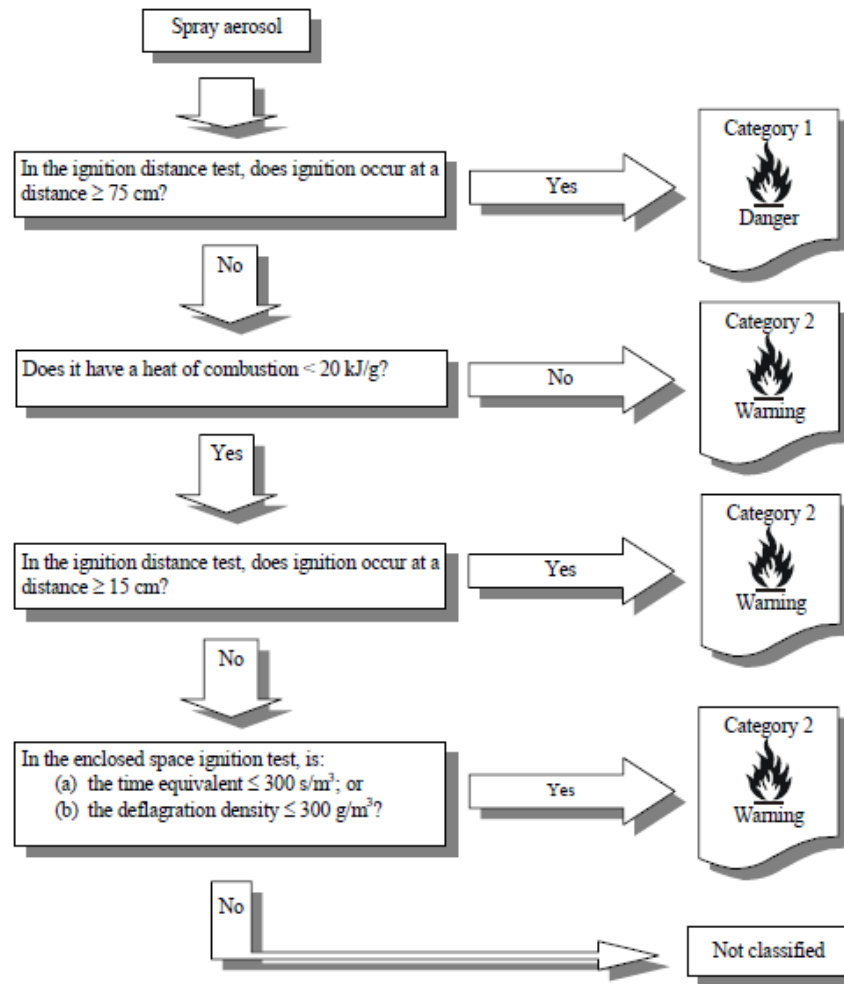
Category	Criteria
1	<p>Contains $\geq 85\%$ flammable components and the chemical heat of combustion is ≥ 30 kJ/g; or</p> <p>a) For spray aerosols, in the ignition distance test, ignition occurs at a distance ≥ 75 cm (29.5 in), or</p> <p>b) For foam aerosols, in the aerosol foam flammability test</p> <p>(i) The flame height is ≥ 20 cm (7.87 in) and the flame duration ≥ 2 s; or</p> <p>(ii) The flame height is ≥ 4 cm (1.57 in) and the flame duration ≥ 7 s</p>
2	<p>Contains $> 1\%$ flammable components, or the heat of combustion is ≥ 20 kJ/g; and</p> <p>a) For spray aerosols, in the ignition distance test, ignition occurs at a distance ≥ 15 cm (5.9 in), or</p> <p>in the enclosed space ignition test, the</p> <p>(i) Time equivalent is ≤ 300 s/m³; or</p> <p>(ii) Deflagration density is ≤ 300 g/m³</p> <p>b) For foam aerosols, in the aerosol foam flammability test, the flame height is ≥ 4 cm and the flame duration is ≥ 2 s</p> <p>and it does not meet the criteria for Category 1</p>

Canadian Classification

2. Flammable Aerosols — Category 2
- An aerosol dispenser that generates
- (a) a spray aerosol that does not meet the criteria for the category “Flammable Aerosols — Category 1” and that has
 - (i) a heat of combustion ≥ 20 kJ/g,
 - (ii) an ignition distance ≥ 15 cm, based on test results from the ignition distance test for spray aerosols performed in accordance with sub-section 31.4 of Part III of the Manual of Tests and Criteria,
 - (iii) a time equivalent ≤ 300 s/m³, based on test results from the enclosed space ignition test performed in accordance with sub-section 31.5 of Part III of the Manual of Tests and Criteria, or
 - (iv) a deflagration density ≤ 300 g/m³, based on test results from the enclosed space ignition test performed in accordance with sub-section 31.5 of Part III of the Manual of Tests and Criteria; or
 - (b) a foam aerosol that does not meet the criteria for the category “Flammable Aerosols — Category 1” and that has a flame height ≥ 4 cm and a flame duration ≥ 2 s, based on test results from the aerosol foam flammability test performed in accordance with sub-section 31.6 of Part III of the Manual of Tests and Criteria

GHS/UN Classification

Decision logic 2.3 (b) for spray aerosols



Why Is This Important?

- You can classify an aerosol with HOC ≥ 20 kJ/g as non-flammable if it passes the tests under the OSHA Standard
- An aerosol with HOC ≥ 20 kJ/g is Category 2 elsewhere
- Practically it may not matter but you may save some testing cost knowing this

Consumer Labeling

■ What is a consumer product?

■ OSHA

Any consumer product or hazardous substance, as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively,

■ CPSC

A product brought into or around a dwelling and related buildings (Garages, sheds, etc.). Does not include industrial supplies – labeled as and marketed solely for industrial use.

Includes products designed primarily for professional use but available to consumers in retail stores for non-professional use.

Who Governs Consumer Product Labeling?

- OSHA exempts consumer products from labeling under OSHA
 - (b)(5) This section does not require labeling of the following chemicals:
 - (v) Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission; and,

Who Governs Consumer Product Labeling?

- CPSC mandates labeling for all hazardous substances that are consumer products
- If your products are sold retail and available for use around the home – label per CPSC
- Dual labeling may be difficult/conflicting
- Remember – OSHA DOES require a SDS

Why Not GHS?

- Hazard definitions are not the same
- Testing methods may vary
- Consumers will not be trained on the new labels
- CPSC permits risk assessments for chronic health hazards
 - 16CFR 1500.135 provide guidance on risk determination. Potential exposure and bioavailability are considered to evaluate risk. Acceptable risk for carcinogens is 1 in one million excess risk. Safety factors are applied to NOEL/LOEL data for others.

What if I Cannot Meet June 1

- OSHA has issued an enforcement memo updated 5/29
- Compliance officers will not enforce for mixtures if
 - Information from upstream RM supplier is not available
 - Mfg. has exercised “reasonable diligence and good faith” in attempting to obtain needed classification information
 - Must update labels within 6 months of 2012 SDS
 - IF COMPLIANT WITH HAZCOM 1994

Supplier Obligations

- Upstream suppliers must send Hazcom 2012 SDS to customers when available
 - With next shipment
 - Immediately on request
- Failure to do so will be referred for enforcement

Reasonable Diligence / Good Faith

- Manufacturer must show substantial efforts to
 - Obtain classification/SDS from supplier
 - Find information themselves
 - Classify themselves based on data
- Documentation
 - (a) Develop and document process used to gather information from upstream suppliers and the status of such efforts;
 - (b) Develop and document efforts to find hazard information from alternative sources
 - (c) Provide written account of efforts (dates, copies etc.)
 - (d) Provide written account of continued dialogue with its distributors informing them why it has been unable to comply with HCS 2012; and,
 - (e) Develop the course of action it will follow to make the necessary changes to SDSs and labels.

Compliance Extension

- Manufacturer/Importer must update SDS as soon as possible and labels within 6 months of receiving the needed information
- Repackagers are chemical manufacturers under Hazcom
- Citations may be issued after that time
- Distributors must also document their efforts to obtain compliant SDS and label and on a cases-by-case basis may ship 1994 labeled product until December 1, 2017 (SDS send immediately after receipt)
- Policy will not extend more than 2 years

What about packaged stock?

- Manufacturers: Existing stock packages for shipment before 6/1/15
 - No requirement to re-label
 - Must send 2012 labels for each container with the shipment
- Distributors: Existing stock packages for shipment before 12/1/15
 - No requirement to re-label
 - Must send 2012 labels for each container with the shipment
 - Distributor must send 2012 SDS as soon as they receive them
- The HCS Directive will cancel both memos

FAQ from OSHA

- Can you use GHS criteria from newer versions of GHS?
 - For OSHA Hazard Classes – no, use OSHA
 - For other hazard classes, OK
- Small Packages
 - Use fold-out, pull out labels
 - Minimum required
 - Product identifier, pictogram, signal word, Manufacturer name and phone number, statement that full label on outer package

Canada WHMIS 2015

- Hazardous Products Regulations Published February 11, 2015
- Effective Immediately
- Transition period ends for manufacturers June 1, 2017
- Transition period ends for distributors June 1, 2018
- Transition period ends for employers December 1, 2018

		Manufacturers and Importers	Distributors	Employer
Phase 1	From February 11, 2015 until Phase 2	WHMIS 1988 or WHMIS 2015	WHMIS 1988 or WHMIS 2015	WHMIS 1988 or WHMIS 2015*
Phase 2	From June 1, 2017 until Phase 3	WHMIS 2015	WHMIS 1988 or WHMIS 2015	WHMIS 1988 or WHMIS 2015*
Phase 3	From June 1, 2018 to Completion	WHMIS 2015	WHMIS 2015	WHMIS 1988 or WHMIS 2015*
Completion	December 1, 2018	WHMIS 2015	WHMIS 2015	WHMIS 2015*

Overview of HPR

- Adopts Rev 5 of the GHS (other than aerosols)
- Very similar to US adoption
- Additional Hazards Covered
 - Biohazardous
 - PHNOC and HHNOC
- Labeling
 - Refers to the GHS Rev 5 Annex 3 for label elements except Canada specific hazards

Overview of HPR

- SDS Format same as US/GHS
- Information in Sections 12-15 will not be enforced
- Labels and SDS must be bilingual
- Regulation contains small container exemptions
- Canada and OSHA believe a single SDS and label for NA is the goal.
- For more information
- <http://www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simdut/ghs-sgh/classification/hazardous-products-produits-dangereux/index-eng.php>

Thank You

Questions?