

The Globally Harmonized System and OSHA Hazard Communication Revision

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Overview

- Where are we with implementation of the OSHA Standard (Hazcom 2012)?
- Specific Issues for Aerosols.
- What are the compliance dates?
- OSHA vs Consumer Labeling
- International Implementation – we all want to export, right?

OSHA HCS 2012 Effective Dates

- The final rule was effective 60 days following publication in the Federal Register (May 25, 2012)
- Employers must 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
- 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 will soon release 3 guidance documents for industry
 - Small entity guidebook (within one month)
 - Hazard Classification Guidance (e few months)
 - Compliance directive for Hazard Communication

Aerosol Classification

- 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

OSHA 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 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

OSHA 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

OSHA GHS Aerosol Labeling

Non-Flammable Product

WARNING

Contains gas under pressure; may explode if heated.

Protect from sunlight.

Store in a well-ventilated place



GHS Rev 4 Aerosol Labeling



Extremely Flammable Product

DANGER Extremely Flammable Aerosol.

Pressurized container: may burst 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.

Do not pierce or burn, even after use.

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

GHS Rev 4 Aerosol Labeling

Non-Flammable Product

WARNING

Pressurized container: may burst if heated.

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

Do not pierce or burn, even after use.

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

Aerosol Classification

Hexane Isomers	92112-69-1	60%	Flammable Liquid Category 2 Aspiration Toxicity Category 1 Skin Irritation Category 2 Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects) Aquatic Chronic Category 2 Aquatic Acute Category 2
n-Hexane	110-54-3	30%	Flammable Liquid Category 2 Aspiration Toxicity Category 1 Skin Irritation Category 2 Reproductive Toxicity Category 2 Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects) Specific Target Organ Toxicity Repeat Exposure Category 2 Aquatic Chronic Category 2 Aquatic Acute Category 2
Cyclopentane	287-92-3	5%	Flammable Liquid Category 2 Aquatic Chronic Category 3 Aquatic Acute Category 3
Carbon Dioxide	124-38-9	5	Not Hazardous

Aerosol Classification

- >85% Flammable components, Heat of Combustion >30 kJ/g (Hexanes 41.1, Cyclopentane 41.9 kJ/g)
- Flammable Aerosol Category 1
- Gas Under Pressure: Compressed Gas
- Health Hazards – assign component classification, follow mixture rules.
 - Aspiration Toxicity Category 1
 - Skin Irritation Category 2
 - Reproductive Toxicity Category 2
 - Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)
 - Specific Target Organ Toxicity Repeat Exposure Category 2 (nervous system)

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 to Do?

- Add statements to your SDS to explain why the labeling is different
- Train marketing and others about the difference
- Add information to websites, etc. to explain the difference
- Other ideas?

Country Overview

- The GHS has been implemented in the following countries/regions

New Zealand

European Union

China

Korea

Japan

Brazil

Australia

Singapore

Taiwan

Vietnam

Indonesia

United States

Americas

■ Mexico

- Voluntary adoption of Rev 3 GHS June 2011
- All hazard classes and categories included
- GHS format for SDS

■ Brazil

- Aligns with Rev 1 GHS
- 2011 Substances, 6/1/2015 Mixtures

■ Canada

- Proposed regulations issued fall 2013
- Expected to be very similar to US
- Dropping WHMIS border

EU / Middle East

■ EU

- Labeling CLP, SDS REACH
- Adopted all Hazard Classes but not some categories
- Retained some hazards not GHS – labeling EUH phrases
- REACH added e-SDS (exposure scenario)

■ Middle East

- Many countries have adopted GHS and others will accept it – generally follow EU

■ Russia

- Voluntary following EU

Asia

■ Japan

- IHSI adopted GHS in 2006
- Mandatory for 640 substances and their mixtures 2011
- Labeling and SDS based on Rev 4

■ Korea

- Mandatory 2013
- Certain MOE substance classifications are mandatory

■ China

- Revised GHS 2014 to Rev 4
- No Aspiration, Lactation, STOT SE 3 and Ozone Layer

■ Taiwan

- Rev 2 – all categories and classes

Asia

- Singapore
 - Effective mixtures 2015
 - Rev 2
- Thailand
 - Rev 3 GHS, Substances 2013, Mixtures 2017
- Vietnam
 - Substances 2014, Mixtures 2016
- Indonesia
 - In effects 2014

Australia/New Zealand

■ Australia

- Based on Rev 3 GHS

- 2014 Substances and 2017 Mixtures

■ New Zealand

- 2001 adoption

- 2008 compliance required

- Hazard Classes are numbered base on transport

Thank You

Questions?