

Implementation of HazCom 2012 (US GHS)







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The purpose of this document is to communicate important information regarding Covestro LLC's implementation of the U.S. Occupational Safety & Health Administration (OSHA) revised Hazard Communication Standard, known as HazCom 2012 (29 CFR 1910.1200).

HazCom 2012 adopted the United **Nations Globally Harmonized System** of Classification and Labeling of Chemicals (GHS). GHS prescribes consistent methodologies for characterizing health and physical hazards for chemical substances, and requires that the information be communicated in a consistent manner on product labels and Safety Data Sheets (SDS). The intention is to improve worker understanding of chemical hazards and precautions, and ultimately to reduce workplace injuries and illnesses. For detailed information about HazCom 2012, please consult OSHA's website:

www.osha.gov/dsg/hazcom.

The information provided in this document is for reference purposes only and reflects Covestro' interpretation and actions to address HazCom 2012. We encourage customers and distributors to consult their own regulatory and legal professionals regarding specific activities within their companies.

What are some of the primary requirements of HazCom 2012?

HazCom 2012 requires chemical manufacturers to classify chemical substances and mixtures in accordance with detailed criteria for health and physical hazard endpoints (also known as Hazard Classes). Within each Hazard Class, the severity of the hazard must also be determined; severity is indicated by Category, with Category 1 being most severe. The classification (Hazard Class and Category) of the substance or mixture dictates the appropriate Signal Word (e.g., Warning), Pictogram (symbol), and Hazard and Precautionary Statements that must be placed on SDSs and labels. SDSs must include 16 sections, each having specified content, while the content of labels is also prescribed in detail. The compliance deadline for manufacturers to reclassify chemical substances/mixtures and prepare SDSs/labels is June 1, 2015. Distributors have until December 1, 2015, to begin shipping products with the new SDSs/labels.

Covestro is taking action to ensure timely compliance with HazCom 2012. Our experts in Product Safety and Regulatory Affairs are available to answer your questions regarding Covestro's implementation of HazCom 2012.

What are some of the changes I can expect to see on the Safety Data Sheet (SDS) as a result of the implementation of OSHA HazCom 2012?

- HazCom 2012 will lead to significant changes in the appearance of all Covestro U.S. SDSs and labels. Perhaps the most notable change will be the addition of pictograms, but you can expect to see other changes as well, such as the addition of product uses and restrictions and percent unknown acute toxicity. In addition, some of the standard SDS elements will change location.
- While not common, some products currently considered hazardous may now be non-hazardous, and vice versa.
- The hazardous components currently listed in Section 3 of the SDS may change because of new requirements for which components must be listed.

- Some products may now be classified for certain hazard classes which were not previously, and vice versa.
 - For example, some products may be classified as sensitizers, mutagens, or reproductive toxins, because of a new 0.1% concentration limit for mixtures that contain these types of substances.
- Due to changes in the criteria for classifying hazards, some products previously identified as skin and/or eye irritants may now be classified more severely.
- The above are just some of the changes that you may see.

Will there be differences in classification for the same product in different regions?

Yes. Several regions have adopted the UN GHS into regulation; however, there are differences in regional adoption and agency interpretations. For instance, the European Union has mandated classifications through its Classification, Labeling and Packaging Regulation (CLP) for many substances. In the U.S., classifications are self-determined by individual manufacturers in accordance with OSHA's HazCom 2012. Although the intent of GHS is a globally harmonized system, in reality, regional adaptations require different classification and labeling by law.

Will there be differences in classification for the same product within the U.S.?

Possibly. In the U.S., classifications are self-determined by individual manufacturers in accordance with OSHA's HazCom 2012. Due to the complexity of the OSHA HazCom 2012 rule, different company interpretations of the rule may lead to different classifications. Manufactures may have access to different data which may lead to different conclusions. Lastly, expert judgment when evaluating data may lead to different classifications.

What are the components of the HazCom 2012 label?

OSHA has updated the requirements for labeling of hazardous chemicals under HazCom 2012 and will now require all labels to contain pictograms, a signal word, hazard and precautionary statements, the product identifier and supplier information.

Pictograms are graphic symbols (diamond-shaped) used to communicate specific information about the hazards of a chemical. See an overview of all GHS pictograms at right:

Signal Words are used to indicate the relative level of severity of the hazard and alert the reader to a potential hazard on the label.

There are only two words used as signal words: "Danger" and "Warning."

"Caution" is not included as a signal word.

Hazard Statements describe the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard. For example, "Harmful if swallowed."

Precautionary Statements describe

recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to the hazardous chemical or improper storage or handling. There are four types of precautionary statements: prevention, response, storage and disposal. For example, "Wash hands and face thoroughly after handling."

Flame Over Cycle



Oxidizers

Skull and Crossbones



 Acute Toxicity (fatal or toxic)

Gas Cylinder



 Gases Under Pressure

Environment (Non-Mandatory) Corrosive



Aquatic Toxicity



- Skin Corrosion/ Burns
- Eye Damage
- Corrosive to Metals

Exploding Bomb



- Explosives
- Self-Reactives
- Organic Peroxides

Health Hazard



- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Flame



- Flammables
- Pyrophorics
- Self-Heating
- Emits
- Flammable Gas
- Self-Reactives
- Organic
 Peroxides

Exclamation Mark



- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)

When can I expect to see the new SDSs and labels for Covestro products?

Covestro expects to begin releasing SDSs and labels in the second quarter of 2015. Covestro is fully committed to complying with the requirements of HazCom 2012 and is working diligently to ensure compliance in advance of OSHA's deadline of June 1, 2015.

Will Covestro continue the use of the National Fire Protection Association (NFPA) and Hazardous Materials Information System (HMIS)?

No. As part of the HazCom 2012 implementation, Covestro has decided to discontinue the use of NFPA and HMIS ratings on SDSs and labels. This is because NFPA and HMIS rating systems are inconsistent with GHS, and their continued use could lead to confusion.

Will the HazCom 2012 implementation have any impact on the chemical composition of Covestro products?

No. Product compositions will not be impacted. Although the product warnings may now appear different, the product composition will remain unchanged.

Does HazCom 2012 affect compliance with U.S. Food and Drug Administration (FDA) or U.S. Environmental Protection Agency Toxic Substances Control Act (TSCA) regulations?

No. OSHA HazCom 2012 is unrelated to these other regulations.

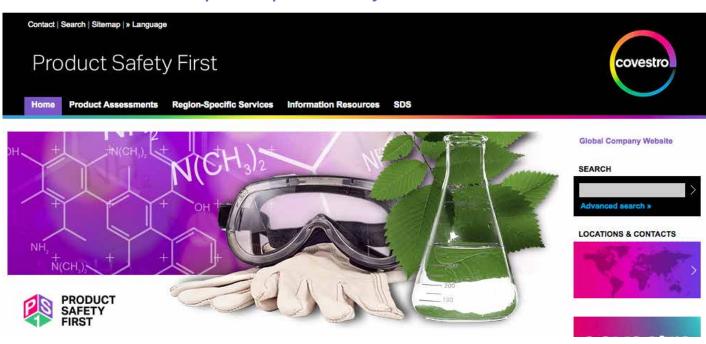
What action is Covestro taking to address GHS in Canada and Mexico?

WHMIS 2015 implements GHS in Canada. Chemical manufacturers have until June 1, 2017 to be in compliance with classification, SDS, and labelling requirements. Covestro fully intends to meet the Canadian government's compliance deadline. Mexico's GHS implementation is currently voluntary, however there is a proposed regulation to make it mandatory. Covestro has decided to convert to GHS for Mexico on the same timeline as for the US. Covestro will continue to monitor the situation regarding the proposed Mexican regulation and will implement actions to ensure compliance.

Where can I get more information?

To learn more about HazCom 2012, please consult OSHA's website: **www.osha.gov/dsg/hazcom/**.

For information about Covestro products, please contact the Covestro Product Safety and Regulatory Affairs Department at 412-413-2835 or http://www.productsafetyfirst.covestro.com/





Covestro LLC

1 Covestro Circle Pittsburgh, PA 15205 Phone: 412-413-2835 www.productsafetyfirst.covestro.com The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This applications specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by Covestro.

Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.