Introduction

When OSHA revised the Hazard Communication Standard to align with the United Nations’ model HazCom system called the Globally Harmonized System of Classification and Labelling of Hazardous Chemicals (GHS) in 2012, it set forth a series of phased-in compliance deadlines. This year, over a span of just six months, two of its four phased-in GHS deadlines will go into effect.

By adopting GHS, countries and agencies gain a universal playbook for classifying chemical hazards, authoring SDSs and labeling chemicals. The ultimate goal is to break down barriers to international trade, save manufacturers from having to create multiple disparate documents and labels, and provide employees with consistent hazard information on labels and across products and across manufacturers. This is not to say that every country that adopts GHS does so in the same way.

The United Nations encourages adopting countries to pick and choose which elements of the system it will incorporate into its existing chemical regulations. (This is referred to as the ‘Building Block Approach.’) Obviously, this approach does not result identical adoption and regulations by all countries. However, the flexibility does drive greater participation than could likely be achieved by stricter adoption requirements — as evidenced by the over 65 countries have already adopted or are in the process of adopting GHS.

In the United States, many covered employers are still struggling to satisfy requirements of OSHA’s first GHS deadline, which went into effect on December 1, 2013. This was the date by which all employers were to have completed employee training on the new GHS label elements for shipped containers, and the updated safety data sheet format. There were 6,148 HazCom violations issued by OSHA in FY 2014, making it OSHA’s 2nd most frequently cited standard. Of those HazCom citations, 3,282 qualified as “serious” violations, classified by OSHA as involving a high probability of death or physical harm to workers. The five most-cited forms of HazCom violations were:

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1 OSHA Guide to GHS
2 OSHA HCS 2012
3 Safety + Health 2014
Employee information and training failures
Developing, implementing and maintaining a written hazard communication program failures
Developing and maintaining safety data sheet failures
Labels on shipped containers failures
Employee training on new labels and safety data sheets formats failures

With more GHS deadlines on the horizon, it’s important for employers to identify shortfalls in their GHS preparedness plans and deficiencies in their HazCom Programs. This is important for preventing noncompliance, and more importantly for protecting employees from the dangers associated with a compromised HazCom Program.

The following is a review of OSHA HazCom responsibilities, changes brought about by GHS, and a deep dive into OSHA’s remaining GHS deadlines. The discussion has been outlined as follows:

- Level Setting on HazCom Basics
- GHS Deadlines, Issues and Expectations
- Two High-Level Changes to HazCom; Roadmap to Compliance
- Beyond HazCom 2012.

Once businesses covered by the HazCom Standard have the information they need, it should be possible for them to take the actions necessary to assure GHS compliance in their workplace throughout the GHS transition.

Level Setting on HazCom Basics

In brief, the purpose of the Hazard Communication Standard is to ensure that chemical hazard information is shared by upstream producers of chemicals with the downstream users of those chemicals. As such, three distinct groups have responsibilities under HazCom 2012: manufacturers of chemicals, distributors of chemicals, and employers who ‘use’ chemicals in their workplaces. In OSHA parlance, ‘use’ means “to package, handle, react, emit, extract, generate as a byproduct, or transfer.”

Under HazCom rules, the responsibilities for each group are as follows:

Chemical Manufacturers must begin the hazard communication process by evaluating and classifying the hazards of its chemicals and providing chemical labels and safety data sheets to downstream users.

Chemical Importers & Distributors, similar to chemical manufacturers, must ensure the chemicals it provides to downstream users are properly classified (especially if being imported from outside jurisdictions) and that downstream users are provided with corresponding labels and safety data sheets.

4 OSHA Small Entity
5 OSHA HCS 2012
Employers or End-Users of Chemicals have five key responsibilities designed to ensure employees exposed to hazardous chemicals have immediate access to all chemical hazard information and that they receive relevant training on the same. The responsibilities include:

1. Maintaining a written hazard communication plan / program and making it available to covered employees
2. Maintaining a written chemical inventory of hazardous chemicals to which employees are exposed
3. Ensuring the proper use of labels and warnings, especially on the immediate container of a hazardous chemical
4. Maintaining safety data sheets and providing employees access to them in accordance with Right-to-Know provisions
5. Educating employees on their rights under the Hazcom Standard and training them on the specific hazards of the chemicals to which they are exposed

In order for chemical manufacturers, distributors and employers to effectively tackle GHS responsibilities, they would do well to first manage deficiencies within their current HazCom Programs.

NOTE: OSHA refers to the pre-GHS standard as “HazCom 1994” and to the GHS-aligned standard as “HazCom 2012”

GHS Deadlines, Issues and Expectations

When OSHA adopted GHS, it implemented a series of four phased-in compliance deadlines.

The first deadline, December 1, 2013, was the date by which employers were to have trained employees on the new GHS formats for safety data sheets and labels.

The second deadline was June 1, 2015. That was the date by which chemical manufacturers, importers and distributors must reclassify their chemicals and begin shipping chemical products with labels and safety data sheets in the updated GHS formats. (Note: this deadline also applied to employers who choose to perform their own chemical classifications instead of relying on those provided by manufacturers, distributors, or importers.)

The next deadline is December 1, 2015. That’s the date by which distributors must only ship chemical products labeled in the HazCom 2012 /GHS-format. Distributors were given an extra six months beyond the June 1, 2015 deadline to divest themselves of old inventory labeled under HazCom 1994.

The final deadline is June 1, 2016. That’s the date by which employers are expected to be in full compliance with HazCom 2012. That means making any necessary updates to their Hazard Communication Program, training employees on new hazards identified in during the reclassification process, updating workplace labels if necessary and anything else required by HazCom 2012.

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6 OSHA Fact Sheet
7 OSHA Small Entity
8 OSHA HCS 2012
Let’s look more closely at the effect of these requirements on the three groups involved: manufacturers/importers, distributors, and employers/end-users.

**June 1, 2015 Deadline**

**Chemical Manufacturers**

By this date, manufacturers were charged with reclassifying their chemicals using the new GHS health and physical hazard criteria adopted by OSHA and producing GHS-formatted SDSs and labels.

OSHA outlines the classification process this way:

- Gather relevant data pertaining to the chemical
- Review data to ascertain hazards of the chemical
- Determine if the chemical will be classified as hazardous according to the definition of hazardous chemical
- Categorize health and physical hazards by severity where appropriate

HazCom 2012 introduces two important changes over HazCom 1994, they are: 1.) a new definition for hazardous chemical, and 2.) the introduction of the concept of severity

Under HazCom 1994, a hazardous chemical was any chemical that had an OSHA covered health or physical hazard.

Under HazCom 2012, a “hazardous chemical” is defined as a chemical that poses a physical or health hazard as prescribed by the GHS criteria OSHA adopted (which is outlined in Appendices A and B of the revised HazCom Standard); or a chemical that is classified as a simple asphyxiant, combustible dust, or pyrophoric gas. Additionally, chemicals known to be hazardous, but which do not fit neatly into one of the categories established above, are classified as a Hazard Not Otherwise Classified (HNOC). HNOCs are considered hazardous chemicals under OSHA’s new definition and are expected to be included on the safety data sheet. The difference between HNOCs and the other categories are that HNOC information is not required on the label, while the other defined hazards are required to be included on both the label and SDS.

Regarding hazard severity: under GHS adoption, chemical manufacturers, and distributors are required to determine if a chemical is hazardous (like they’ve always been), and now must also determine the degree of the hazard for most health and physical hazards. OSHA, by the way of adopted GHS categories, provides specific criteria for determining the severity. Below is a table taken from Appendix B of the HazCom Standard showing the classification criteria for flammable liquids.

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9 OSHA Guide to GHS
10 OSHA HCS 2012
11 OSHA HCS 2012
The concept of severity is a big change in the United States, and the use of categorization numbers has been an issue of debate. Under the GHS categorization model, the lower the number, the greater the severity; and the higher the number, the less the severity.

The use of numbers in this way rankled many in the safety community because of concerns about conflicts with NFPA and HMIS numbers and rating systems (NFPA and HMIS are third party hazard communication labeling systems widely used in a variety of industries). In the NFPA and HMIS systems, higher numbers indicate greater hazards, while lower numbers indicate lesser hazards. Many stakeholders believed the differences between GHS and NFPA and HMIS systems would create conflict; however, OSHA has downplayed concerns and issued guidance on the compliant use of the respective systems in tandem.

**GHS Health and Physical Hazards**
With OSHA’s adoption of GHS, many of the general health and physical hazard classes remain the same, though there several new hazards, like Corrosive to Metals and Germ Cell Mutagenicity. Here are the health and physical hazards under HazCom 2012 with new hazards marked by an asterisk:

### Health
- Acute Toxicity
- Aspiration Toxicity
- Skin Corrosion/Irritation
- Serious Eye Damage/Eye Irritation
- Respiratory or Skin Sensitization
- *Germ Cell Mutagenicity
- Carcinogenicity
- *Reproductive Toxicity
- Target Organ Systemic Toxicity – Single and Repeated Dose

### Physical
- Explosives
- Flammable – Gases, Aerosols, Liquids, Solids
- Oxidizers – liquids, solids, gases
- Self-Reactive Substances

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12 OSHA NFPA Comparison
13 OSHA HCS 2012
• Self-Heating Substances
• Pyrophoric – liquids, solids
• Organic Peroxides
• ✪ Corrosive to Metals
• Gases Under Pressure
• Water-Activated Flammable Gases

Many chemical manufacturers and distributors experiencing the new classifications for the first time have experienced what MSDSonline coins “Classification Shock.” That is, surprise that their chemicals are more hazardous than initially believed. It’s possible that a chemical that has been in the marketplace for years will come out of the reclassification process with a number of new recognized hazards or hazards that are more severe than expected.

Once the proper classifications are in place, chemical manufacturers must produce labels and safety data sheets in GHS formats.

**Safety Data Sheets and Labels**

With GHS adoption, there are significant changes to MSDSs and labels, which are two of the primary sources of communicating hazardous chemical information. Safety data sheets, for instance, get a name change. Formerly referred to as Material Safety Data Sheets (MSDSs) under HazCom 1994, going forward under HazCom 2012, they are referred to simply as Safety Data Sheets or SDSs.

SDSs are also given a format change that includes the strict ordering of 16 preordained sections. This change ensures that the first half of the document will always contain the most important information needed for use during an emergency (e.g., Hazard Identification, First Aid Measures, Fire Fighting Measures), while the second half of the document contains more technical and less urgent information (e.g., Transport Information, Regulatory Information). Under HazCom 1994, OSHA had a performance-based approach to labels on shipped containers, meaning chemical manufacturers were given wide latitude in determining what information should be included on the chemical container label. This approach is called “performance based” because OSHA determined whether or not a label was compliant based on how well it did its job (i.e. “performed”). Essentially, compliance was completely subjective based upon an OSHA inspection.

Labels on shipped containers are no longer performance based. OSHA is not leaving it up to chemical manufacturers to figure out what information to include. Under HazCom 2012, OSHA is prescribing what information should appear on a label once it has been classified. OSHA does allow information in addition to the six elements listed below; however, at a minimum, these elements are expected to appear on both the shipped label as well as the safety data sheet:

1. Product / Chemical Identifier
2. Supplier Information
3. Pictograms
4. Signal Words
5. Hazard Statements

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14 OSHA Brief SDSs
15 OSHA Brief Labels
6. Precautionary Statements

Let’s examine them in greater detail.

**The Product or Chemical Identifier** is exactly what it sounds like and should match the product or chemical identifier used on the safety data sheet. It should also be included on the employer’s chemical inventory.

**Supplier Information** should include the name, address and phone number of the responsible party for the chemical.

**Pictograms** are black hazard symbols on white backgrounds with red diamond borders. Nine in all, they cover the range of recognized health, environmental and physical hazards at the UN level of GHS. Even though OSHA does not have jurisdiction over environmental hazards, it does allow the use of the pictogram for environmental hazards, meaning employers are encouraged to train employees on all nine symbols.

**Signal words** are the words used to quickly orient the user to the severity of the hazards of the chemical. There are two signal words in the GHS system: Danger and Warning. Only one of these words should appear on a label as determined by the most stringent requirements applicable to the hazards.

**Hazard Statements** are short statements that provide information on the nature or severity of a hazard.

**Precautionary Statements** are statements that provide information on how to use a hazardous chemical safely, what to do in case of emergency, how to safely store the chemical, and so forth.

The benefit of this approach is that once all chemicals have been reclassified using the adopted GHS criteria, hazard information (i.e. pictograms, signal words, hazard statements and precautionary statements) will be consistent across companies and products.

OSHA’s expectation is that the immediate container of the hazardous chemical is always labeled, even if a larger package containing smaller individual containers is also labeled. There are only a few exceptions, such as when the shipper has demonstrated to OSHA’s satisfaction that the inside containers are not able to carry all of the required information, or when the outside pack is also the immediate container for the hazardous chemical.¹⁶

**Labeling of Small Shipping Containers**

Many chemical manufacturers and distributors want to know if they are required to include all of the prescribed shipped label elements on the label of very small shipping containers. The answer is, essentially, yes. OSHA says in a letter of interpretation dated June 4, 2013: “All hazardous chemicals shipped within the United States must comply with the HCS 2012 requirements.”¹⁷

However, OSHA provides examples of acceptable options for including all of the relevant information on smaller containers, saying, “Labeling can be done with pull-out labels, fold back labels, tags or other methods. While pull-out labels, fold back labels, tags or other

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¹⁶ Letter of Interpretation 12/20/2012  
¹⁷ Letter of Interpretation 6/4/2013
methods to attach the label to the shipped container may cost more than traditional glued on labels, an increase in cost is an unacceptable reason to avoid use of these labeling methods.”

In the event a shipper can provide evidence that it is not feasible to include all of the required GHS information, OSHA does allow for practical accommodations. In the event it is not possible to include all six label elements, OSHA instructs labelers to provide the following elements on the immediate container:\textsuperscript{18}:

- Product Identifier
- Hazard Statements
- Signal word
- Pictogram
- Supplier Name and Phone number
- A statement indicating that the full label information for a chemical is provided on its outside package.

The practical accommodation is not intended to be a manufacturer’s first resort. The manufacturer must first try to comply with the standard requirements for a shipped label. If it is not feasible for manufacturer to create a legible, compliant shipped label they should be prepared to explain why, and cost cannot be the rationale.

\textit{Authoring}  
Given the changes discusses in the last section, it is easy to understand perhaps why so many chemical manufacturers and distributors missed the June 1, 2015 deadline. Unfortunately, many companies are still behind the compliance curve. The following are considerations companies should take into account when it comes to classifying its chemicals and authoring its safety data sheets and labels.

To begin, it’s important to understand that authoring a new SDS is not as simple as reordering the old MSDS. A better approach is to think of it as a brand new authoring project. Earlier in this paper, OSHA’s classification steps were outlined, this is a good time to revisit and expand upon the first step in classifying a chemical — gathering relevant data.

Relevant data can include laboratory tests, internal and external studies, information gathered from other respectable sources.\textsuperscript{19} A key concern is that the data (especially tests) be based upon sound scientific and testing principles. Companies relying on old data need to be sure the data points are still acceptable and that new discoveries have not superseded the old information. An authoring best practice is to keep records and reference any information used in the authoring and classification process. Think worst case scenario, what would happen in the court of law if called upon to explain choices made in the authoring process.

A critical component to classification and authoring success is the skill set of the author(s). Many companies that have completed the reclassification process have been surprised by how shoddy their previous MSDSs were. In order to balance all of the factors that need to be weighed, like chemical composition, routes of chemical exposure, it is helpful for authors to have knowledge/experience/training in:

\textsuperscript{18} OSHA Rundman SCHC  
\textsuperscript{19} OSHA Guide to GHS
• Chemistry
• Physiology
• Biology
• And the ability to recognize appropriate
  o Statistical significance
  o Population size
  o Margin of error

This is all in addition to possessing a good understanding of GHS classification fundamentals. For companies that have to comply with the HazCom Standards of other countries, the complexities of the tasks are increased.

Getting everything aligned just to be able to begin the actual authoring requires significant effort, this is one reason going forward, companies that need to make changes to their safety data sheets may be better off being proactive instead of reactive.

As of June 2, 2015, upstream raw material suppliers that did not have GHS-compliant SDSs or labels available for downstream manufacturers or product formulators are out of compliance.

**Chemical Blenders**

Meeting the June 1, 2015 deadline proved especially difficult for chemical manufacturers who blend chemicals from upstream suppliers to create new chemical mixtures. In order for the downstream manufacturer to reclassify their blended products and author the SDSs and labels for its products, many of those blenders rely on information from upstream suppliers of raw materials. Many blenders were unable to complete their work by the June 1, 2015 deadline because their suppliers failed to meet the same deadline, or completed work just one time.

This was a known problem going back as far as OSHA’s initial adoption of GHS. Many stakeholders expected/requested that OSHA stagger deadlines for chemical manufacturers and downstream chemical blenders, giving the latter time to receive needed information from upstream suppliers. The American Coatings Association was particularly vocal in advocating on behalf of chemical blenders in this predicament, sending a letter to OSHA to ask for additional time. OSHA responded with a February 9, 2015 enforcement memo titled: *Enforcement Guidance for the Hazard Communication Standard's (HCS) June 1, 2015 Effective Date.*

In the end, OSHA did not heed requests to extend the deadline for chemical blenders; however, it did offer an alternative, and that is to provide leniency when it comes to enforcement. In order for any type of leniency to be granted during an inspection, the manufacturer must fall into the very specific chemical blender scenario and must be able to demonstrate a good faith effort to try and comply with the deadline. The letter offers the examples of a good faith effort:

• Obtain classification information and SDSs from upstream suppliers;
• Find hazard information from alternative sources (e.g., chemical registries); and,
• Classify the data themselves.

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20 OSHA Final Rule
21 OSHA Enforcement Memo
Additionally, OSHA stated in the memo that for mixtures shipped by a manufacturer after June 1, 2015 that does not comply with HCS 2012, inspectors will check to see if the seller did the following:

- Developed and documented the process used to gather the necessary classification information from its upstream suppliers and the status of such efforts;
- Developed and documented efforts to find hazard information from alternative sources (e.g., chemical registries);
- Provided a written account of continued dialogue with its upstream suppliers, including dated copies of all relevant written communication with its upstream suppliers;
- Provided a written account of continued dialogue with its distributors, including dated copies of all relevant written communication with its distributors informing them why it has been unable to comply with HCS 2012; and,
- Developed the course of action it will follow to make the necessary changes to SDSs and labels.

In other words, it is not enough for chemical blenders to state that they were unable to obtain the necessary information from upstream suppliers, they must also document their communications with both their upstream suppliers, but also any downstream customers who may be affected.

**Distributors**

For the June 1, 2015 deadline, OSHA did not distinguish between chemical manufacturers and distributors. Those distributors who have classification responsibilities and who are required to produce SDSs and labels were required to complete their work by June 1, 2015. However, for those distributors who encounter similar issues to chemical blenders and have trouble getting information from raw material suppliers, OSHA includes them in the selective enforcement guidelines discussed above\(^\text{22}\), providing relief for those who can follow the outlined steps for making a good faith effort to comply.

**Employers**

The June 1, 2015 deadline did not solely affect chemical manufacturers, distributors and importers, but also the end-users of chemicals (employers)\(^\text{23}\). For example, upstream reclassification and authoring delays, by their very nature, flow downstream — meaning employers must deal with the side effects of compliance issues occurring further up the chemical pipeline. Even without delays, the result of suppliers meeting the June 1, 2015 deadline translates into work and compliance activities for the end users of chemicals as those updates make their way downstream.

A common misconception many employers have is that their libraries of safety data sheets would be updated automatically from MSDSs to SDSs on June 1, 2015. This simply not the case. No magic switch was flipped on June 1, 2015, so employers should be prepared for a shifting HazCom environment. Also, employers would do well to remember that chemical manufacturers are not required to send a safety data sheet with every shipment. OSHA only requires a safety data sheet to be sent with the initial shipment or the first shipment after a change has been made to the document, or when explicitly requested by a downstream user.

\(^\text{22}\) OSHA Enforcement Memo
\(^\text{23}\) OSHA Small Entity
In other words, independent of a new purchase, an employer should not necessarily expect updated SDSs to flow into their facilities. On the other hand, employers need to be on guard for the foreseeable future, because a supplier is only required to send that update once, and an updated SDS could come into a facility at any time. If it is missed, it will necessitate the employer needing to reach out to the chemical manufacturer to secure the updated SDS.

So what should an employer do when they receive a new shipment after the deadline and it is not preceded or accompanied by an updated SDS and label? In these cases, OSHA requires employers to take action and make a good faith efforts to obtain the updated documents. If they fail to get an updated SDS, they should reach out to their local OSHA office for assistance. Should an issue surface where OSHA is inspecting their facility and identifies that an older MSDS is being used, the employer should be able to explain the reason for this discrepancy, and provide evidence of their attempts to remedy the situation.

Given all of the moving parts and hassle that late arriving SDSs can cause, employers may want to reach out to their vendors to inquire about how those vendors are progressing on HazCom 2012 adoption. A surprising number of affected parties are still in the dark on the changes to the Hazard Communication Standard. A well-placed phone call may be the action that sets the chemical reclassification and safety data sheet updating in motion.

One question a number of safety professionals have is, “Will we have to maintain two safety data sheet libraries during the transition – one for MSDSs and one for SDSs?” The answer is no. During the transition to HazCom 2012, employers may have libraries with a mix of non-GHS formatted and GHS formatted safety data sheets. The big task is ensuring your employees are equally comfortable with both. Essentially, OSHA has said that employers train workers on the new SDSs and ensure their workers are comfortable with MSDSs for as long as they must use them. Thus, a new employee coming aboard would have to be trained on both SDSs and MSDSs.

Employers, if they have not already begun to receive an influx of update SDSs, should prepare for the SDS churn. Even with delays, it is not unreasonable to expect that in the next year, almost every safety data sheet in an employer’s library will be updated. That’s a lot of paper shuffling. Now is a good time to consider an electronic SDS management solution to help with the transition. At the very least, a dedicated resource and good processes need to be in place to manage the flow of documents and to ensure a compliant catalog of SDSs.

Workplace or Secondary Container Labels
With all of the changes to the label on a shipped container, many employers have concerns about their workplace label requirements. Under HazCom 2012, workplace labels remain performance-based. So workplaces have considerable latitude regarding what will go on their in-house labels, but success or failure will ultimately be determined by the performance of the label and the subjective opinion of an inspector during an inspection.

Looking at recent guidelines for workplace labels, OSHA provides employers with three primary options.

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24 OSHA Small Entity
25 OSHA Letter of Interp on SDS
26 OSHA Brief on Labels
Option 1 is to completely replicate the shipping label. Essentially take key elements of the shipped label (product identifier, signal word, hazard statement, pictogram, precautionary statement, etc.) and transfer them to the workplace label.

Option 2 is to include the product or chemical identifier and then some combination of other GHS elements. OSHA doesn’t tell you which combination, just some grouping that conveys the necessary hazards. The basic litmus test for compliance is: Does the label and the training the employees receive provide them with the same level of knowledge they would have gotten from the manufacturer shipped label? The bar is set low for what needs to go on the label, but the bar is set high for what an employee will need to be able to understand about the chemical based on the label and training.

Option 3 is to use a homegrown system. OSHA says if the workplace label system was compliant under HazCom 1994, an employer can keep using it. That said, again, the bar is very high for how that label must perform. In short the workplace label must convey all of the known health and physical hazards for the chemical to the employee — either because it’s explicit on the label or because the employee has been trained so well, they are able to discern it quickly from the information provided.

Option 3A is to use NFPA, HMIS or some similar system. One question some employers have been asking under HazCom 2012 is whether NFPA and HMIS systems are still required by OSHA? It’s a tricky question. Some people believe NFPA and/or HMIS systems were designed or at least mandated by OSHA. That is not the case. Both systems were developed by third parties; however, OSHA has allowed them to be used as part of a compliant workplace labeling system. OSHA has explicitly said employers can continue to use HMIS and NFPA labels under GHS. There is nothing preventing their use in the HazCom Standard.

However, if employers choose to use them as a standalone workplace labeling system, they need to exercise caution. A product or chemical identifier is required for labels, and a product identifier is not a standard component of an NFPA or HMIS label. OSHA also requires workplace labels to communicate to users the all of the relevant health and physical hazards of a chemical. NFPA labels are only concerned with those hazards that arise in an emergency, while HMIS labels are only concerned with those hazards that arise in the normal use of the chemical. Conversely, GHS is geared to both kinds of hazards.

Updating Older Chemical Containers in the Facility
When it comes to labeling older chemicals in a facility, OSHA says employers are not required to update labels on older shipped containers.27 Nevertheless, employers are required to ensure employees are aware of all known hazards of the chemicals to which they are exposed. Thus, if employers become aware of new hazards for chemicals that were labeled under HazCom 1994, they would be obligated to ensure employees are brought up to speed on the chemicals. Furthermore, employers are required to update their own workplace labels as they become aware of new information.

Training is an Ongoing Requirement
While the date has come and gone, the December 1, 2013 deadline to train employees on the GHS label changes and updated SDS format remains an ongoing training obligation.

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27 OSHA Brief on Labels
First, OSHA requires employers to train employees on the HazCom Standard. Second, employers must train employees on the specific hazards of the chemicals to which they are exposed in the course of their work. This can be accomplished either by training them on the specific chemicals they are exposed to, or by grouping the chemicals according to their hazard types and training employees on those hazard types. Either way, employees need understand they can always get additional information about the individual chemicals via the safety data sheets.

Additionally, OSHA requires that employees be trained on any new hazards of the chemicals to which they are exposed. For instance, it is possible, even likely, that chemicals which have been in use for many years in a facility could be discovered to have new hazards based on the GHS reclassification effort.

OSHA does not require that training be documented, but strongly recommends that it is. Specifically, recommends documenting employee identifier, subject, score, test dates, and evaluations.  

During an inspection, OSHA is going to want to see evidence that employees have been properly trained. Without documentation, the employer is going to have an uphill battle proving that learning took place. Documentation can also assist in knowing when it’s time to retrain. OSHA requires retraining for employees when they no longer retain the required information. OSHA does not mandate the entire training be repeated, just those parts that are no longer retained. By setting up and retaining evaluations, employees can be retested to see where the gaps in learning are, and then targeted spot training can back-fill those gaps.

**December 1, 2015 Deadline**

As mentioned above, distributors were required, like chemical manufacturers, to meet the June 1, 2015 deadline if they have classification responsibilities or requirements to produce SDSs and labels. Nevertheless, OSHA understands that some distributors are simply passing information and product along from one party to another. They do not do any classifying and do not repackage anything. The second big deadline for 2015 is specifically for these distributors.

OSHA basically says that the six month extension for distributors is solely for distributors whom have old stock within their warehouses and need to locate and re-label to GHS. The expectation is that all stock that comes into the warehouse after June 1 will already be GHS compliant as the manufactures should have already met the deadline on June 1st.

For those distributors who are in a jam because their upstream suppliers are delayed in complying with the June 1, 2015 deadline, OSHA has said they too might qualify for a reasonable extension on the December 1, 2015 deadline. According to its February enforcement memo, OSHA says in limited situations a distributor may be allowed to ship chemicals permissibly labeled with HCS 1994-compliant labels until December 1, 2017.

The key to compliance is communication with upstream and downstream stakeholders and documenting good faith efforts to stay in compliance. Also, all of the above, and any selective enforcement on OSHA’s part, only applies to those distributors who are at the very least

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28 OSHA Draft Training Model
29 OSHA HCS 2012
30 OSHA Enforcement Memo
compliant with HazCom 1994 requirements. OSHA will not grant extensions on HazCom 2012 deadlines for companies that are not current with HazCom 1994.

**June 1, 2016 Deadline**
The final HazCom 2012 deadline is aimed at employers. By that deadline, employers are expected to generally be finished with their transition to the GHS aligned HazCom Standard. Included in that assumption is that any necessary changes have been made to their written HazCom plan, workplace labeling has been updated if necessary, that the SDS library is generally in order, and that employees have been trained on all hazards (including any new ones) of the chemicals to which they are exposed.

OSHA recommends during this time that employers divest themselves of chemicals that are no longer used or needed, thus reducing risk to employees and the need for compliance activities associated with the chemicals. It is also a good idea going forward for employers (and everyone in the lifecycle of hazardous chemicals) to keep an eye out for new updates to the HazCom Standard. The United Nation updates GHS approximately every two years. It is expected that going forward, OSHA will have more frequent updates as well.

**Roadmap to Compliance**
The following are some simple steps employers and others can take to stay in compliance during the transition.

**Designate a GHS Transition Leader**
This is not required by OSHA, but is definitely a best practice. Having someone who is accountable for the organization’s handling of the transition is going to be absolutely crucial. And as was just discussed, OSHA will likely be updating GHS to stay close to the United Nations’ evolving guidelines.

**Keep HazCom Plan Current**
OSHA requires plans to be updated as conditions in the facility evolve. As noted at the start of this document, failure to develop an adequate HazCom plan is the second most cited form of HazCom violation. For instance, the chemical inventory should be a living document that is updated as new chemicals come in and out of the facility.

**Train and Prepare Employees**
Throughout all of this process, OSHA has emphasized that training is key. Employers must train employees on labels and SDSs and the specific hazards to which they are exposed; additionally, employees must know how information on labels and SDSs relates to the HazCom program and workplace.

**Ensure Existing Systems can Handle Transition**
As has been discussed, there is an influx of newly-formatted safety data sheets and labels that is on the way. Now is the time to ensure the proper people and resources are in place to handle the volume of work that will need to be done. Employers with hundreds or thousands of chemicals, or companies with multiple locations and many worker stations could quickly get overwhelmed by the volume of work required to keep all of the information up-to-date and to communicate changes to employees.

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31 OSHA HCS 2012
There are many great electronic resources available to help smooth the transition and OSHA has explicitly said these types of tools are compliant with the HazCom Standard. For electronic management of SDSs, OSHA does require adequate backup for the files in the event of a foreseeable emergency — this can include printing a paper backup kept in a central location, or the use of computers with external power sources to access information in the event of an emergency.

**Beyond HazCom 2012**

**Canada Adopts GHS**
On February 11, 2015, Canada published updates to its Hazardous Products Act in Canada Gazette II signaling the official adoption of GHS at the federal level.

Canada is referring to its updated WHMIS regulation as “WHMIS 2015” which is replacing its previous iteration now referred to as WHMIS 1988. The new Hazardous Products Regulations (HPR) replaces the Controlled Products Regulations (CPR) and Ingredient Disclosure List.

Unlike the U.S., Canada’s overall adoption is multifaceted and requires the individual adoption of GHS by its interconnected provinces and territories, which each have their own rules and jurisdiction over hazardous chemicals. Some of these governing entities have already outlined their plans for adoption, while others have not.

Canada had aimed to bring about countrywide adoption by June 1, 2015 to coincide with the big GHS deadline in the U.S. However, it’s uncertain if the provinces and territories will be ready to roll out their plans by that date. While the specific plans for each territory and province have yet to be finalized, it is possible that some will choose to use the ‘building block approach’ to adoption and will implement more stringent requirements than those implemented at the federal level.

Like the U.S., Canada realized immediate compliance with a GHS-aligned regulation couldn’t happen overnight, so at the federal level the country implemented a series of three compliance deadlines for its suppliers, distributors and employers that begin May 31, 2017 and end on November 30, 2018, with full compliance expected by December 1, 2018.

**Conclusion**

GHS is just the beginning. As the world grows smaller and chemical lifecycles continue to push geographic boundaries, more attention will need to be paid to state, national and international regulatory lists and jurisdictions. More attention will also need to be paid to the ways in which chemicals affect the communities and people outside the workplace.

OSHA cites a statistic from a California report on Green Chemistry that claims there are over 190,000 injuries and over 50,000 deaths related to chemical hazards a year. The important thing is the lives those numbers represent.32

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32 Berkley Research 2006
The good news is there is more help than ever before for those safety professionals and employers who want to significantly improve the working conditions of employees and reduce the risks to their communities. OSHA and other agencies around the world are working to promote the move toward the use of more sustainable chemical products and are providing resources to make that easier for everyone involved in the lifecycle of chemicals.

Bibliography


