

## Global Harmonization System Adoption Preparing Your Company

**PS:** Please provide a brief description of your professional background and of your position with SiteHawk.

**Jason:** I have more than 15 years' industry experience ranging from lab-pack chemist to environmental scientist and regional SH&E manager. I have worked with SiteHawk for more than 3 years as a sales manager while serving as a regulatory resource and presenting on various regulatory topics, such as the Hazard Communication Standard (HCS); Globally Harmonized System of Classification and Labelling of Chemicals (GHS); Registration, Evaluation, Authorization and Restriction of Chemical substances (REACH); and the Emergency Planning and Community Right-to-Know Act (EPCRA).

Prior to joining SiteHawk, I served as the regional EHS manager for a chemical management and consulting company.

**PS:** The U.S. is scheduled to adopt GHS in 2011. GHS will standardize classification and labeling of chemicals and related hazard communication into one format. What are the primary ways in which GHS will affect SH&E professionals working in the U.S.? How will their practices and methods change?

**Jason:** For SH&E professionals and others responsible for the communication of hazardous chemical components working in the U.S., this means an authoring avalanche is about to hit as the millions of MSDS and labels currently in circulation must be revised, rewritten and republished to comply with GHS provisions. SH&E professionals responsible for authoring MSDS will first need to reauthor all product MSDS and labels in accordance with GHS then redistribute those updated product MSDS.

SH&E professionals on the receiving end of those updates will be bombarded with an influx of MSDS revisions/versions. This creates the huge task of managing the new MSDS and labels in accordance with HCS. It is hard enough now to keep up with the versions/revisions, but get ready because there will be a big wave coming once GHS becomes a final rule in the U.S.

Along with these new versions/revisions, employees will need to be retrained on the new elements of the MSDS and labels. Educating employees on the label and MSDS changes due to the updated product classifications, pictograms, signal words, and hazard and precautionary statements will represent the greatest training

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challenge. From a process standpoint, training managers should plan to follow existing HazCom requirements, as the current training procedures are more detailed than the GHS training recommendations and will likely be retained.

To address the growing volume of chemical data activity, many organizations are taking advantage of electronic MSDS management, particularly in an Software as a Service (SaaS) model. In an SaaS model, companies use web-based software and service providers to reduce internal information technology costs, increase accuracy and provide real-time chemical information. In an SaaS model, service providers populate and maintain—and, for the more robust systems, update—comprehensive chemical information databases.

As customers or chemical suppliers submit new and revised MSDS, service providers update and index the important chemical hazard information. The service provider may have several hundred customers who use its applications and services. When one customer submits a revised MSDS that has new hazard classifications due to a formula change, the service provider updates the data and makes the MSDS available to all customers who use the system. This process gives SH&E and industrial hygiene professionals ready access to current, real-time chemical hazard data.

An SaaS system typically includes tools that allow administrative users to sort, view and report on these data by areas within their facility (departments or processes), by specific hazard (e.g., all materials that are highly toxic, corrosive or mutagenic) or by specific constituent (e.g., all materials containing toluene).

**PS:** Expected benefits of GHS include unified communication, enhanced worker and environmental protection, improved international trade and reduced costs. What other benefits will GHS provide? Will GHS have any disadvantages?

**Jason:** The benefits will include greater consistency with a clear message across sectors through harmonization of signal words, pictograms and



Jason Massey

### Hotlinks

**EPA** Environmental Protection Agency [www.epa.gov](http://www.epa.gov)

**EPCRA** Emergency Planning and Community Right-to-Know Act [www.epa.gov/oeaagct/lcra.html](http://www.epa.gov/oeaagct/lcra.html)

**HSC** Hazard Communication Standard [www.osha.gov/as/opa/facts-hcs-ghs.html](http://www.osha.gov/as/opa/facts-hcs-ghs.html)

**REACH** Registration, Evaluation, Authorization and Restriction of Chemical Substances [http://ec.europa.eu/environment/chemicals/reach/reach\\_intro.htm](http://ec.europa.eu/environment/chemicals/reach/reach_intro.htm)

**UN GHS** United Nations Globally Harmonized System of Classification and Labelling of Chemicals [www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html)

hazard warnings; better workplace protection; and the cost reduction associated with preparation of labels and MSDS.

Internationally, GHS will enhance protection of people and the environment, facilitate international trade in chemicals, reduce the need for duplicate testing and evaluation, and assist countries and international organizations in the sound management of chemicals.

These are just some of the proposed benefits that we will realize once GHS has been implemented—it will vary from one country to the next based on the current state of regulations in that country. GHS allows for what is referred to as the building block approach, which means that agencies and countries will be given the flexibility to adopt those portions of GHS that best fit within their current regulatory frameworks and those portions which are most applicable to their specific agency. It is important that countries/agencies implement GHS in as consistent a manner as possible to attain these benefits.

International and domestic SH&E officials advocate that the new provisions will make compliance, training and user comprehension easier. However, companies must take a smart approach to adoption that does not overwhelm their own resources. Also, companies that employ a global approach to MSDS authoring will reap the benefits of a unified approach to preparing and presenting chemical information, including timeliness to market, cost-effectiveness and consistency of information for users.

The only disadvantage is that which comes with change. The transition will require a big investment from all involved. However, the end result will be well worth the investment.

### **PS: How will GHS affect OSHA's HCS?**

**Jason:** Since the adoption of GHS can be done in a building block fashion, not everything will change. OSHA has stated that it will maintain its current HCS regulatory framework—only changing those provisions that need to be changed to align with GHS. OSHA's primary purpose, as it was under the old HCS, is to reduce "chemical source illnesses and injuries"—to enhance protection for those working with and handling chemicals.

Because OSHA has indicated it will

retain the HCS provisions not affected by GHS, the written program is expected to be largely unchanged. It will, however, need to be modified to



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include any resulting changes to labeling and MSDS communication, as well as related employee training.

This will result in:

- reauthoring of MSDS to incorporate the new classifications and formats (16 sections required in a specified order);
- updating all labels to incorporate the changes in classification (signal words, pictograms, hazard statements and precautionary statements);
- training all personnel on these changes;
- modifying the written program to reflect the changes.

### **PS: How will GHS distinguish between hazard evaluation and hazard classification?**

**Jason:** The current HCS is performance oriented such that the standard outlines the expected outcome but not the specific implementation steps for hazard communication. GHS takes a much more detailed approach, specifying

the detailed criteria and communication elements for each hazard class.

Currently, when evaluating hazards, flexibility and the use of professional judgment are used to identify the most relevant hazards associated with chemicals. Under the new GHS rule, all hazards are to be classified according to specific, detailed criteria for determining hazard classifications for chemicals. There will be much less flexibility when classifying materials.

### **PS: What is EPA's position on GHS? How will the agency assist during the transition period?**

**Jason:** In the U.S., EPA and three other key federal agencies have regulations that would be affected by the GHS adoption. Under the Federal Insecticide, Fungicide and Rodenticide Act, EPA is responsible for registering pesticides for use in the U.S., including review and approval of pesticide labels. Full implementation of GHS would require the EPA to: 1) complete an economic and regulatory impact analyses; and 2) conduct rulemaking to change current classification and labeling regulations.

Given the size and scale of the U.S. pesticide market and the importance of label review in the U.S. system of pesticide regulation, EPA recognizes that significant time and effort would be required to implement the GHS label changes and to conduct effective outreach and education activities. After labeling rules and policies change, there would need to be time for a transition to the new labels. Implementation also will require coordination at a national and international level to avoid unnecessary disruptions. EPA foresees this process occurring in multiple stages over several years to produce concrete outputs, which will contribute to attaining the public health protections and programmatic benefits GHS offers.

Additionally, EPA will continue to communicate with stakeholders as the agency moves forward with training and outreach, data collection, coordination and the development of an implementation strategy that would minimize costs and make the transition as smooth as possible.

### **PS: How long will U.S. companies have to comply with GHS once it takes effect?**

**Jason:** We expect a 3- to 5-year window in which to bring all MSDS up to par, but businesses and SH&E profes-

sionals still have a daunting task in front of them to meet the requirements.

Bear in mind that this is not “the sky is falling” rhetoric. UN published and approved the first edition of GHS in 2003. The European Union (EU) already has adopted GHS, as have Japan and China. Other countries, such as Canada, are, like the U.S., working on aligning their current regulations with GHS. OSHA published the proposed rule in the *Federal Register* on Sept. 30, 2009. OSHA signified its intent to modify the existing HCS to conform with the UN’s GHS. During the transition, compliance with either the current or the new rule will be sufficient.

OSHA estimates that in the U.S. more than 7 million workplaces and 945,000 hazardous chemical products will be affected by GHS. While the implementation of GHS in the U.S. may not occur until late 2011 or 2012, the changes will be far-reaching and vast in nature. Since other countries, such as Japan, have already implemented GHS for many chemicals, employees could be faced with the new documentation soon. But, keep in mind that thoughtful preparation is the best way to ensure a successful, smooth transition.

**PS: EU, Japan and New Zealand are currently transitioning to GHS. How are they handling the transition thus far, and how can the U.S. learn from their experience?**

**Jason:** As mentioned, EU, Japan and New Zealand are all in the transition phase and, to our knowledge, are on course to meet adopted timelines. GHS is an international effort to establish a universal set of classification criteria for communicating physical, health and environmental hazards of chemicals. Efforts to develop GHS began in 1992, and after nearly 15 years of work on the details, many countries have or are now ready to begin GHS implementation.

The U.S., other countries and international organizations are working together to share lessons learned, promote shared scientific and technical expertise, lessen the resource burden on governments and the regulatory community, and maintain high standards for the protection of human health and the environment.

**PS: What recommendations does SiteHawk have for creating an effective GHS transition plan?**

**Jason:** It is no longer a question of if

GHS will affect U.S. companies in the future but *when*. In fact, for companies doing business internationally today, a GHS transition phase may already be in place if those countries with which they are doing business have already adopted GHS (e.g., EU, Japan, China, New Zealand).

Consider these tips for an effective and efficient transition to GHS:

**1) Get informed.** Learn all you can about GHS and be on the lookout for information related to the new changes to best determine its potential impact on your organization. Find a good resource for gathering GHS-related information and check it often.

**2) Timeframes.** Be aware of implementation dates in your country as well as in the countries in which you do business (see the timeline at [www.ghsinformation.com](http://www.ghsinformation.com) for information by country). Also, be aware of the differences in adoption between countries as it may affect your exportation processes.

**3) Do not go it alone.** Make sure your product and service providers have a transition plan in place and are able to support you as you make the necessary changes. This includes vendors who assist with training, MSDS management, authoring new compliant documents, labeling and transportation. Will they be able to assist you as you transition to GHS? Are they informed about GHS, and will they be a useful resource for you?

**4) Vendor MSDS management system.** Support your transition with a chemical information management system that will aid in the administration of documents classified under existing and future regulations. Be sure your system is ready for GHS and is able to provide a consistent and clear message to your employees, even in the event an MSDS does not.

How will you deal with vendors that are slow to transition to GHS and provide the updated MSDS requirements your employees need? Does your MSDS management system provide a means for tracking new GHS classifications and pictograms? If your chemical vendors are slow to respond to GHS, can your MSDS management system offer GHS classification guidance to assist with consistent messaging for your employees?

**5) Workplace labels.** Update workplace labels to

include the new pictograms and statements. To ensure workplace safety and allow for consistency, GHS labels may need to be created before an updated vendor MSDS is available. How will you create such a label and classify it appropriately? Contact your labeling vendor to find out how it plans to assist you with compliance for the upcoming label changes. If your vendor MSDS management program is able to track the new fields and classifications, can it also provide a GHS-compliant label?

**6) Product MSDS authoring and distribution.** How will you reclassify your products according to GHS, and how will that information be distributed to your customers? Be sure your authoring method will support GHS classification according to the various countries’ requirements and that it will be able to create the necessary associated product labels and documents.

You might consider adding an addendum with the GHS classifications and related pictograms to your existing product MSDS during the interim period before full implementation is required. Explore your options with respect to distribution; a validated electronic distribution method could greatly assist in allaying some of the costs associated with such a large project.

**7) Training program.** Training will be a key component of your overall GHS approach and should incorporate information as it is introduced into the workplace. Employees and emergency responders will need to be trained on all new elements they will face, from hazard statements to pictograms. If products are imported from countries that implemented GHS prior to the U.S., your employee training may need to begin earlier than expected. The sooner you begin planning your training approach, the more likely you will achieve a successful transition. It is not too early to begin familiarizing your employees with the upcoming pictograms and MSDS format changes.



Want to learn more about GHS and its implementation? Read Jason’s complete interview at [www.asse.org/psextra](http://www.asse.org/psextra).