



# **CHEMICALS AND COMPLIANCE**

A COMPANY-WIDE APPROACH TO  
HAZARD COMMUNICATIONS





## A company-wide approach to hazard communications

In many ways, hazard communication is defined by what it is not. Only when a ship is stalled at a port, or when gaps in SDS appear, does the issue of regulatory compliance capture industries' attention. Instead of seeding committees and beginning investigations when things go wrong, with this white paper we talk prevention. What areas of your hazard communications need to be fortified? Which could be made more efficient? Chemical and product manufacturers must be prepared, as compliance is now more rigorous than ever.

### What this white paper will cover:

Think of this document as a safety data sheet for safety data sheets; highlighting the key requirements your products must fulfill to be compliant with global hazard communication standards. This resource will help you prepare upfront, with labeling and SDS that support your supply chain, wherever it may lead.

You'll gain:

- An appreciation of the task your regulatory professionals face
- Knowledge of the 'hazards' within hazard communications
- The skills to select and customize the best possible automated compliance system
- Information to strengthen your overall regulatory approach, now and for the future

### What is hazard communications?

It's about people. Hazard communication standards – aka “workers' right to know” – are designed to protect employees and the public; within your company, down the supply chain, and with those who share our environment. If humans are going to be exposed, HazCom standards dictate that they must be informed.

It's a very timely topic in the United States as we move through the June 1, 2015 deadline for the Occupational Safety and Health Administration (OSHA) HazCom standards, first regulated in 2012. With the law in effect, all products shipped in the U.S. must comply with the U.S. adaptation of the U.N. Globally Harmonized System for Classification and Labeling (often referred to as the GHS or “Purple Book”).

June 1 was also the deadline for chemical mixtures to be labeled and accompanied by relevant SDSs, as part of the European Union's existing Chemical, Labeling and Packaging (CLP) regulations. Complex chemical mixtures will now need to be spelled out to dictated regulatory thresholds as low as one tenth of a percent in some hazard categories. Certain thresholds vary between the U.S. and E.U., making classification that much more complicated.

At the heart of these guidelines is you: the chemical or product manufacturer. As the upstream source of many downstream products, it's your responsibility to undertake hazard assessments and communicate those risks through SDS, appropriate hazard labeling, and to a lesser extent, downstream employee training. All chemicals and products will

need documentation that includes:

- Physical and health hazards
- Physical and chemical properties
- Routes of exposure
- Precautions for safe handling and use
- Personal protective equipment to be used
- Emergency and first-aid procedures
- Control measures
- Safe disposal practices

Manufacturers now need to communicate a lot of information and data to remain compliant with national guidelines. If your supply chain is global, the complexity shoots through the roof.

### The hidden challenges

OSHA estimates some 650,000 distinct chemicals already exist, with many more being added each year. Each has to have its own chemical assessment, and a planned and documented route for transport, storage and eventually, disposal. A simple pictogram does not do the trick. GHS modifications are expected to have a profound effect on five million workplaces and more than 43 million workers.

Despite the name, the GHS is not a globally harmonized standard; rather it's a generally





harmonized standard representing each country's interpretation of U.N. guidelines. SDS still need to be customized for specific regions and nations. Some national and state regulations go beyond the requirements outlined in the Purple Book. Chemical and product manufacturers are often trading across multiple jurisdictions, requiring numerous versions of these complicated SDS in multiple languages. Guidelines will continue to evolve; your company's regulatory protocol needs to as well.

### Compliance issues can impact the bottom line

The OSHA HazCom 2012 regulations require SDS to possess a much greater level of detail concerning chemical concentrations. Compliance at this level becomes more than just a workload issue for your regulatory department – it affects the entire business. Here are some examples of the ways you may soon be affected:

- Sourcing may need new specifications written up by the Quality Department
- Bills of materials (BOM) may need to be adjusted
- Manufacturing instructions (SOPs) may need updating
- Logistics could face inventory that needs to be worked down or made obsolete

Of greater risk, is the potential for shipments of your product to be stalled or

rejected if they fail to carry the appropriate SDS and labeling. The financial burden may also be felt when it comes to appropriate waste disposal. It's expensive to dispose of hazardous waste. If not done properly, it can cause significant liability for the company. Tracking levels of heavy metals and other hazardous components in products heading for disposal is yet another crossfunctional activity where the days of pen and paper are over.

### Software solutions: automating compliance

Automated compliance software is now a must-have, not only for large chemical companies, but also small- to mid-sized product manufacturers. In recent years, some of the top systems have become affordable at that scale.

Deciding when and how to act is difficult. Committing to the wrong third-party software can lead to fragmented systems, outdated protocols, unnecessary middlemen and closed off information loops in your supply chain.

Not all systems will deliver, and there are several aspects you need to consider. Does your software:

- Improve company efficiency
- Reduce operations waste
- Secure compliancy
- Function internationally
- Allow your company to update alongside changing regulations

### Achieving these specifications requires smart compliance software that includes:

- A central repository that offers data security; balancing the privacy of your formulations, while providing documentation that's accessible to all participants. Company requirements vary, but if your products have multiple chemical components, you will need a flexible system. Software with automated programming logic can process a vast amount of data for thousands of products — all in a reasonable timeframe.
- A cross-functional team of experienced professionals will be needed to define your company's requirements; both your business needs and regulatory considerations. In short, the system will need to be configured.
- Smart logic engines will automate GHS classifications in line with the regional guidelines that affect each of your products, such as OSHA HazCom 2012, EU CLP and China GBT. For companies with international supply chains, this is a major step towards simplifying hazard communications.
- Complete data collection of all the details that may need to be accessed downstream. This might include details such as the heavy metal content of raw materials, for use in hazard evaluations and SDS disclosures. The information



should also be on hand for customer queries about further regulations, such as the Restriction of Hazardous Substances Directive (RoHs) and the Coalition of Northeastern Governors (CONEG).

- Scalable solutions that intelligently determine what varying requirements need to be met, regardless of language, country or regulatory iteration. The derived data can then be integrated with your ERP, PLM, labeling and formulation systems, thus minimizing the common, error-prone process of manually re-entering information. Such a system can grow as you grow, without becoming prohibitively complex.

### Using core data to do more

Good software allows you to enter and store hazard information in a format that can be re-purposed around the globe, for current and future applications. Details are entered just once, but the software derives from that a much greater store of generalized information that can be extracted for SDS to meet many countries' guidelines.

Technology like this is critical for seemingly basic data entry, which in practice is much more complicated. Language translations are a good example. It's not enough to Google translate instructions into another language; countries receiving your goods need SDS compiled with a series of industry-specific defined technical terms. Intelligent automated software systems convert your data entry sections into a numeric code. When it's time to produce specific safety data sheets, it turns that numeric code straight into the corresponding language. This system updates as compliance changes: the information you enter is the same, but the terminology output is updated. This ensures your language will always be on point.

### An Ongoing Solution

Constant change and expansion is a hallmark of regulatory protocols. Today, there are hundreds more regulations than there were just three years ago, and thousands more than in the early 2000s. With the introduction of the new OSHA GHS guidelines, the breadth of data that

is now required for every product – from the purchase of the raw materials to the end of product life – makes it clear that the days of manual upkeep and filing are over. Leveraging new technology is key.

Not all systems are equal. When selecting compliance software manufacturers should screen providers to ensure they have a track record of success. Software should be global, configurable to your needs and possess the scalability needed to grow and adapt alongside your company. Maintenance and IT support should be clear and timely.

Manufacturers can harness the introduction of new GHS guidelines as a positive business opportunity. Install software and protocol that comply with the new regulations, while simultaneously maximizing supply chain efficiency. By intelligently streamlining your processes and compliance you can greatly impact your company's bottom line.

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Joan McGuffey is a compliance professional with over two decades of experience helping chemical companies achieve their regulatory goals. With a deep understanding of OSHA HazCom, WHMIS, GHS, CLP, TSCA and REACH, Joan manages compliance from a product basis, through to company-wide project and process engineering. She brings a strong business acumen to her regulatory management, having held a number of business and development positions within the chemicals industry. Joan has a BS in chemical engineering from Clarkson University, NY, an MBA in marketing from Iona College, NY, and various, up-to-date compliance certifications.

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