

Best practice in developing labels

While GHS aims to create harmonisation, countries are customising their adaptation of the system



Gil Traverse
Solutions Engineer, 3E Company

Developing and maintaining a compliant hazard communication system is challenging. Detailed knowledge of the regulatory landscape is essential to ensure conformance with the myriad of regulatory obligations impacting businesses today.

Global companies, in particular, must have a comprehensive plan in place. They must be privy to all changes in country requirements and meet these head-on in order to maintain compliance while doing business on an international scale.

Particular attention must be paid to the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS). While the initial premise behind GHS was to create harmonisation, countries are increasingly customising their adoption of the system. Additionally, many countries have set specific safety data sheet (SDS) and label template requirements, which means that the format of documents and labels takes careful research and planning to ensure that all specifications are followed.

Many countries' GHS adaptations feature comprehensive and stringent labelling requirements, aimed at improving employees' understanding of relevant hazard information. If workers properly understand the hazards and the required precautionary measures relating to the substances and mixtures they handle, exposure and accidents can be prevented.

These requirements, however, are inconsistent across country-specific GHS adaptations.

Labelling for GHS on a global basis

At a minimum, all GHS labels will have the following data elements:

- » signal word;

- » hazard statements;
- » pictograms;
- » precautionary statements;
- » product identifier; and
- » supplier information.

However, there is significant diversity when comparing GHS labels around the world. The difference among labelling requirements can be illustrated by comparing several specific adaptations, for example, the US, the EU, South Korea and China.

Notable labelling requirements in the US

With the promulgation of HazCom 2012 adopting GHS, the US Occupational Safety and Health Administration (Osha) labelling requirements are very similar to the minimum GHS requirements, with a few notable

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exceptions. Osha requires a section on supplementary information that must identify the percentage of ingredients of unknown acute toxicity, when they are present in a concentration of equal to or above 1%. This section may also contain information on hazards not otherwise classified (Hnoc) or information on personal protective equipment (PPE). While there is no standard on how this section should appear on a label, it is essential that it does not contradict or detract from the required information.

A key change in the transition from

previous hazard communication systems is the use of GHS red-bordered pictograms, which has presented a problem for suppliers without colour printing. With previous hazard communication systems, it was often possible to meet all the label requirements using traditional black-only ink, toner, or black thermal printers. A common strategy was to purchase label stock with pre-printed red borders and simply print the applicable black pictogram inside and leave any other red borders blank. However, Osha's adaptation of GHS forbids the use of empty red borders on the GHS label, forcing suppliers to find alternative colour labelling solutions.

Since the initial release of HazCom 2012, Osha has refused to allow exceptions for labels for small containers (commonly in sizes 50ml or less), like Canada's Workplace Hazardous Materials Information System (WHMIS) and the EU's CLP do. Osha insists that shipped container labels must show all the required elements no matter the size of the packaging. Instead, Osha kept what is known as the "practical accommodation approach", which to many companies seems confusing, unclear and impractical. In order to show all the required labelling information under HazCom 2012, companies have been utilising expensive pull-out labels, fold back labels and tags for small containers. However, the fact remains that there are situations where these solutions are still too large for the container or simply not cost-effective.

In the autumn of 2014, Osha released a letter of interpretation providing guidelines on what workplace small container labels can look like.

It stated: "As a practical accommodation, where the manufacturer can show that it is not feasible to use pull-out labels, fold back labels, or tags, containing the full HCS 2012 required information," the actual immediate container label must have, at minimum, the following:

- » product identifier;
- » appropriate pictograms;
- » manufacturer's name and phone number;
- » signal word; and
- » a statement indicating the full label information for the chemical is provided on the outside package.

Then the outside packaging of the small bottles or vials must contain at minimum:

- » all the applicable label elements, as defined in standard 29 CFR 1910.1200(f)(1);
- » it must be clearly marked to ensure all label elements are visible and it must clearly inform users that the small container must be

Steps to labelling correctly

- » It is important that all containers should be appropriately labelled. As you move a product from its primary to a secondary container, replace shipping labels and include GHS information accordingly.
- » Keep abreast of regulatory reporting needs for all products. Regulations never stop evolving. The dynamic nature of law, mixed with changing product classifications, requires an extra stringent eye to ensure compliance with all regulatory responsibilities.
- » Carefully review the processes used for making labels available to workers and how updates to the labels are managed. Evaluate these processes to ensure that workers cannot accidentally access out-of-date labels and mislabel products.
- » Colour label printing solutions need to consider colour label requirements in conjunction with differences in pictogram size.
- » With previous hazard communication labelling, it was easy to have many different label templates. However, to manage the complex global requirements effectively, many companies are consolidating as much as possible and reducing the number that need to be managed for compliance.
- » Finally, every labelling process should be designed with a focus on business continuity. Disruptions to it can have severe production and shipping implications as well as present serious risks to workers so it is important to have a backup process in place in case of software or hardware failure.

stored in the outer bearing the complete label. The complete label must be maintained on the outer package (for example, it should not be torn, defaced or destroyed); and

- » the manufacturer must ensure that any alternative labelling used does not conflict with any other standards. As such, the outside packaging must not present a hazard while the material is being stored.

EU minimum label size requirements

In Europe, labelling and packaging requirements are set out in Regulation (EC) No 1272/2008, known as the Regulation on classification, labelling and packaging of substances and mixtures (CLP). They impact suppliers who manufacture, import, use or distribute chemical substances and mixtures.

While they align with GHS, the CLP requirements include some of the labelling concepts of the previous legislation, the dangerous substances Directive 67/548/EEC (DSD) and the dangerous preparations Directive 1999/45/EC (DPD), such as the small packaging exemptions.

Most notable in the EU, however, is the strict and somewhat confusing size requirements. Section 1.2 of Annex I to CLP defines the minimum required label size, based on the volume of the container, with the pictogram size being linked to these minimum dimensions. Nevertheless, the label should be large enough to contain all the elements defined by CLP while remaining legible. As a result, it may need to be larger than the minimum area specified; however, if a larger label is used, the pictograms only need meet the minimum required size for the container and do not have to scale with the actual label size.

The EU's CLP also limits the use of P-statements to six, meaning that "not more than six precautionary statements shall appear on the label, unless necessary to reflect the nature and the severity of the hazards."

South Korea has unique pictogram limitations

In Korea, article 5 of the Standard for Classification and Labelling of Chemical Substances and Material Safety Data Sheets requires manufacturers or importers of hazardous chemicals to attach or print a label in Korean, clearly showing hazard

information on the container and package.

Article 6 outlines label content requirements, which should include a pictogram, signal word, hazard statement and precautionary statement. There are, however, many notable exceptions including for a container or a package for hazardous chemicals with a volume equal to or less than 100ml. In this instance, the package or container may be labelled with the chemical's name, pictogram, and signal word and an indication that the material safety data sheet should be consulted for other information. However, a label should include supplier information if it is not on the container or package. Korea also has unique pictogram requirements, stating that if a hazardous substance has more than four hazard or risk classifications, only four pictograms and statements may be indicated in the order of priority.

China label formatting and small package exemptions

In China, the General Rule for Preparation of Precautionary Label for Chemicals (GB 15258 - 2009) outlines labelling requirements. Label elements consist of chemical identification, pictograms, signal words, hazard statements, precautionary statements, emergency phone numbers, supplier identification and reference consulting guiding words, among others.

The label should be inside a black border frame 1mm thick. The spacing outside the border frame should be 3mm in breadth. Another important requirement is that the emergency telephone number on the label must be within China and operational 24hours a day.

Chemical identification is the chemical name of a substance or its common name marked clearly in Chinese and English respectively. With regard to the pictograms, there is no minimum required size and the use of a black frame is acceptable for domestic use. Additionally China provides a simplified label format for containers with a volume of less than 0.1l.

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