GHS Quiz

QUESTION

In conformity with Globally Harmonized System of classification and labelling of chemicals (GHS), Hazard Communication Standard (HCS), requires labels have the following elements once the hazard classification is completed.

What are those elements”’

ANSWER

Pictogram: a symbol plus other graphic elements, such as a border, background pattern, or color that is intended to convey specific information about the hazards of a chemical. Each pictogram consists of a different symbol on a white background within a red square frame set on a point (i.e. a red diamond).

Signal words: a single word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used are “danger” and “warning.” “Danger” is used for the more severe hazards, while “warning” is used for less severe hazards.

Hazard Statement: a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Precautionary Statement: a phrase that describes recommended

measures to be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling of a hazardous chemical.

WHY IS IT RIGHT

THE GLOBALLY HARMONIZED SYSTEM

The Globally Harmonized System (GHS) is an international approach to hazard communication, providing agreed criteria for classification of chemical hazards, and a standardized approach to label elements and safety data sheets. It is based on major existing systems around the world, including OSHA's Hazard Communication Standard and the chemical classification and labeling systems of other US agencies.

OSHA'S ROLE / ALIGNMENT

OSHA modified the Hazard Communication Standard (HCS) to adopt the GHS to improve safety and health of workers through more effective communications on chemical hazards. Since it was first promulgated in 1983, the HCS has provided employers and employees extensive information about the chemicals in their workplaces. The original standard is performance-oriented, allowing chemical manufacturers and importers to convey information on labels and material safety data sheets in whatever format they choose. While the available information has been helpful in improving employee safety and health, a more standardized approach to classifying the hazards and conveying the information will be more effective, and provide further improvements in American workplaces. The GHS provides such a standardized approach, including detailed criteria for determining what hazardous effects a chemical poses, as well as standardized label elements assigned by hazard class and category. This will enhance both employer and worker comprehension of the hazards, which will help to ensure appropriate handling and safe use of workplace chemicals. In addition, the safety data sheet requirements establish an

order of information that is standardized. The harmonized format of the safety data sheets will enable employers, workers, health professionals, and emergency responders to access the information more efficiently and effectively, thus increasing their utility.

TRAINING

OSHA requires that employees be trained on the new label elements (i.e., pictograms, hazard statements, precautionary statements, and signal words) and SDS.

GHS does not include harmonized training provisions, but recognizes that training is essential to an effective hazard communication approach. The revised Hazard Communication Standard (HCS) requires that workers be re- trained to facilitate recognition and understanding of the new labels and safety data sheets.

BENEFITS OF GHS

Adoption of the GHS in the US and around the world helps to improve information received from other countries’since the US is both a major importer and exporter of chemicals, American workers often see labels and safety data sheets from other countries. The diverse and sometimes conflicting national and international requirements can create confusion among those who seek to use hazard information effectively. For example, labels and safety data sheets may include symbols and hazard statements that are unfamiliar to readers or not well understood. Containers may be labeled with such a large volume of information that important statements are not easily recognized. Given the differences in hazard classification criteria, labels may also be incorrect when used in other countries. If countries around the world adopt the GHS, these problems will be minimized, and chemicals crossing borders will have consistent information, thus improving communication globally.

MAJOR CHANGES TO HAZARD COMMUNICATION STANDARD

The major areas of change are:

Hazard classification: The definitions of hazard have been changed to provide specific criteria for classification of health and physical hazards, as well as classification of mixtures. These specific criteria will help to ensure that evaluations of hazardous effects are consistent across manufacturers, and that labels and safety data sheets are more accurate as a result.

Labels: Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.

Safety Data Sheets: Will now have a specified 16-section format.

WHY IS EVERYTHING ELSE WRONG

SCOPE OF GHS

GHS covers all hazardous chemicals and may be adopted to cover chemicals in the workplace, transport, consumer products, pesticides and pharmaceuticals. **The target audiences for GHS include workers, transport workers, emergency responders and consumers.**

GLOBAL GOAL

GHS stands for the Globally Harmonized System of Classification and Labelling of Chemicals. GHS defines and classifies the hazards of chemical products, and communicates health and safety information on labels and safety data sheets). The **Goal** is that the same set of rules for classifying hazards, and the same format and content for labels and safety data sheets (SDS) will be adopted and used around the world. An international team of hazard

communication experts developed GHS.

The need for Global Harmonization

Many different countries have different systems for classification and labelling of chemical products. In addition, several different systems can exist even within the same country. This situation has been expensive for governments to regulate and enforce, costly for companies who have to comply with many different systems, and confusing for workers who need to understand the hazards of a chemical in order to work safely.

GHS delivers distinct benefits.

- Promoting regulatory efficiency.
- Facilitating trade.
- Easing compliance.
- Reducing costs.
- Providing improved, consistent hazard information.
- Encouraging the safe transport, handling and use of chemicals.
- Promoting better emergency response to chemical incidents.
- Reducing the need for animal testing.

MAJOR ELEMENTS IN GHS

There are two

1. Classification of the hazards of chemicals according to the GHS rules.

GHS provides guidance on classifying pure chemicals and mixtures according to its criteria or rules.

2. Communication of the hazards and precautionary information using **Safety Data Sheets** and **Labels:**

Labels – With the GHS, certain information will appear on the

label. For example, the chemical identity may be required. Standardized hazard statements, signal words and symbols will appear on the label according to the classification of that chemical or mixture. Precautionary statements may also be required, if adopted by your regulatory authority.

GHS VOCABULARY

- **SDS ‘** Safety Data Sheet. SDS is the term used by GHS for Material Safety Data Sheet (MSDS).
- **Hazard group ‘** GHS divides hazards into three major groups ‘ **health, physical and environmental.**
- **Class ‘** Class is the term used to describe the different types of hazards.
- **Category ‘** Category is the name used to describe the sub-sections of classes. For example, Self- Reactive Chemicals have 7 categories. Each category has rules or criteria to determine what chemicals are assigned to that category. Categories are assigned numbers (or letters) with category 1 (or A) being the most hazardous.
- **Hazard Statement ‘** For each category of a class, a standardized statement is used to describe the hazard. For example, the hazard statement for chemicals which meet the criteria for the class Self-heating substances and mixtures, Category 1 is Self-heating; may catch fire. This hazard statement would appear both on the label and on the SDS.
- **Precautionary Statement ‘** These statements are standardized phrases that describe the recommended steps to be taken to minimize or prevent adverse effects from exposure to or resulting from improper handling or storage of a hazardous product.
- **Signal word ‘** There are two signal words used by the GHS ‘ Danger and Warning. These signal words are used to communicate the level of hazard on both the label and the SDS. The appropriate signal word to use is set out

by the classification system. Category 1 is Danger while Warning is used for the less serious Category 2. There are categories where no signal word is used.

- **Pictogram ‘** Pictogram refers to the GHS symbol on the label and SDS.

GHS HAZARD/BUILDING BLOCK

There are three major hazard groups:

- **Physical hazards.**
- **Health hazards.**
- **Environmental hazards.**

Within each of these hazard groups there are classes and categories. Each of these parts is called a building block. Each country can determine which building blocks of the GHS it will use in their different sectors (workplace, transportation, consumers). Once the building blocks are chosen, the corresponding GHS rules for classification and labels must be used.

BUSINESS / REGULATION

Suppliers, Importers and Producers duties include:

- Classifying hazardous products.
- Preparing labels and SDSs.
- Providing these elements to customers.

Employers must:

1. Educate and train workers on the hazards and safe use of products.
2. Ensure that hazardous materials are properly labelled.
3. Prepare workplace labels and SDSs as necessary.
4. Provide access for workers to up-to-date SDSs.
5. Ensure appropriate control measures are in place to protect the health and safety of workers.

Workers must:

- Participate in WHMIS and chemical safety training programs.
- Take necessary steps to protect themselves and their coworkers.