

GHS label elements

The standardized label elements included in the GHS are:

- <u>Symbols</u> (<u>GHS hazard pictograms</u>): Convey <u>health</u>, physical and <u>environmental</u> hazard information, assigned to a GHS hazard class and category. Pictograms include the harmonized hazard symbols plus other graphic elements, such as borders, background patterns or cozers and substances which have target organ toxicity. Also, harmful chemicals and irritants are marked with an <u>exclamation mark</u>, replacing the European <u>saltire</u>. Pictograms will have a black symbol on a white background with a red diamond frame. For transport, pictograms will have the background, symbol and colors currently used in the <u>UN Recommendations on the Transport of Dangerous Goods</u>. Where a <u>transport pictogram</u> appears, the GHS pictogram for the same hazard should not appear. Examples of all the pictograms and downloadable files can be accessed on the UN website for the GHS at <u>http://www.unece.org/trans/danger/publi/ghs/pictograms.html</u>
- <u>Signal Words</u>: "Danger" or "Warning" will be used to emphasize hazards and indicate the relative level of severity of the hazard, assigned to a GHS hazard class and category. Some lower level hazard categories do not use signal words. Only one signal word corresponding to the class of the most severe hazard should be used on a label.
- <u>Hazard Statements</u>: Standard phrases assigned to a <u>hazard class</u> and category that describe the nature of the hazard. An appropriate statement for each GHS hazard should be included on the label for products possessing more than one hazard.

The additional label elements included in the GHS are:

- <u>Precautionary Statements</u>: Measures to minimize or prevent <u>adverse effects</u>. There are four types of precautionary statements covering: prevention, <u>response in cases of accidental spillage or exposure</u>, storage, and disposal. The precautionary statements have been linked to each GHS hazard statement and type of hazard.
- <u>**Product Identifier**</u> (ingredient disclosure): Name or number used for a hazardous product on a label or in the SDS. The GHS label for a substance should include the <u>chemical identity</u> of the substance. For mixtures, the label should include the chemical identities of all ingredients that contribute to acute toxicity, skin corrosion or serious eye damage, germ cell mutagenicity, carcinogenicity, reproductive toxicity, skin or respiratory sensitization, or Target Organ Systemic Toxicity (TOST), when these hazards appear on the label.
- <u>Supplier identification</u>: The name, address and telephone number should be provided on the label.
- <u>Supplemental information</u>: Non-harmonized information on the container of a hazardous product that is not required or specified under the GHS. Supplemental information may be used to provide further detail that does not contradict or cast doubt on the validity of the standardized hazard information.

GHS label format

The GHS includes directions for application of the hazard communication elements on the label. In particular, it specifies for each hazard, and for each class within the hazard, what signal word, pictogram, and hazard statement should be used. The GHS hazard pictograms, signal words and hazard statements should be located together on the label. The actual label format or layout is not specified in the GHS. National authorities may choose to specify where information should appear on the label or allow supplier discretion. There has been discussion about the size of GHS pictograms and that a GHS pictogram might be confused with a transport pictogram or "diamond". Transport pictograms are different in appearance than the GHS pictograms. Annex 7 of the Purple Book explains how the GHS pictograms are expected to be proportional to the size of the label text. So that generally the GHS pictograms would be smaller than the transport pictograms.

GHS material safety data sheet or safety data sheet

The safety data sheet (The GHS has dropped the word "material" from material safety data sheet. It will now be called the <u>safety data sheet</u> or SDS) is specifically aimed at use in the workplace. It should provide comprehensive information about the chemical product that allows employers and workers to obtain concise, relevant and accurate information that can be put in perspective with regard to the hazards, uses and <u>risk management</u> of the chemical product in the workplace. The SDS should contain 16 sections. While there were some differences in existing industry recommendations, and requirements of countries, there was widespread agreement on a 16 section SDS that includes the following headings in the order specified:

- 1. Identification
- 2. Hazard(s) identification
- 3. Composition/ information on ingredients
- 4. First-aid measures
- 5. Fire-fighting measures
- 6. Accidental release measures
- 7. Handling and storage
- 8. Exposure control/ personal protection
- 9. Physical and chemical properties
- 10. Stability and reactivity
- 11. Toxicological information
- 12. Ecological information
- 13. Disposal considerations
- 14. Transport information
- 15. Regulatory information
- 16. Other information.

The primary difference between the GHS requirements in terms of headings and sections and the international industry recommendations is that sections 2 and 3 have been reversed in order. The GHS SDS headings, sequence and content are similar to the <u>ISO</u>, <u>EU</u> and <u>ANSI</u> MSDS/SDS requirements. The SDS should provide a clear description of the data used to identify the hazards

GHS SYMBOLS

There are eight required HazCom GHS pictograms and they must be displayed with the symbol in black and bordered in red as illustrated below:

GHS Pictogram Chart



GHS HazCom Training Test

- 1) Where are the msds (sds) books located at each office:
 - a. Southfiled: ______
 - b. Novi:_____
 - c. Livonia:_____
- 2) What year will manufacturers be required to start producing the new labels and safety data sheets for their products?_____
- 3) The main goal of GHS is Identify and inform employees of chemical hazards: True False
- 4) GHS uses classifications to determine what elements are assigned to a chemical: True False
- 5) How many Pictograms are associated with the new GHS labeling system:______
- What shape and color is the border of pictogram:
- 7) How many heading sections are manufacturers required to include on their SDS:_____
- 8) When a substance is moved from one container to another, the new container is called a
 ______ container.
- 9) The new container is required to have a HazCom label: True False
- 10) Name the three main standardized elements of the GHS standardized label:
 - a. _____
 - b. _____
 - C. _____
- 11) The ______ indicates the relative degree of severity of a hazard according to GHS standards and can be either "Danger" or "Warning".
- 12) ______ are standardized and assigned phrases that describe the hazard(s) determined by hazard classification and category.
- 13) Symbols (also called______) convey health, physical and environmental hazard information, assigned to a GHS hazard class and category.
- 14) Circle the symbol that represents Acute toxicity (severe):



15) Circle the symbol that represents Acute toxicity (harmful):

