Hazard Communication and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

When hazardous properties of chemical substances and mixtures have been identified and classified, it is important that this knowledge is passed on to handlers and users. The GHS includes provisions for hazard communication through **label information** and **safety data sheets.**

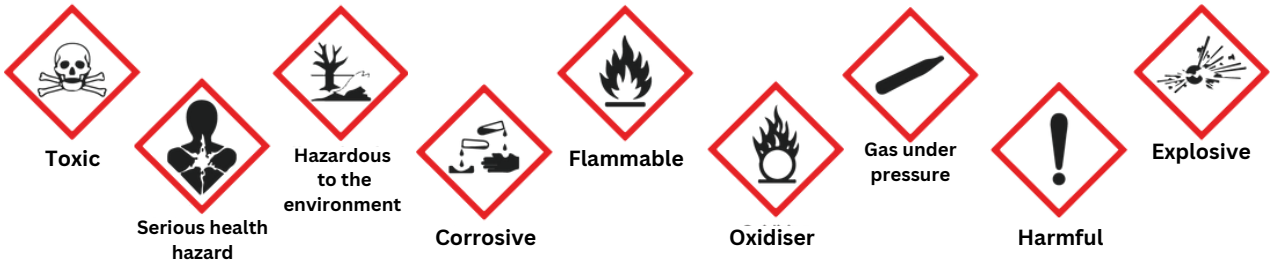
1 What constitutes a GHS label?

A label is a group of written, printed or graphic information elements, which is affixed to, printed on, or attached to the immediate container or to the outside packaging of a hazardous product. It is the main source of hazard information for consumers.

The GHS hazard communication elements are:

- Pictograms
- Signal words
- Hazard statements
- Precautionary statements

The **nine GHS pictograms** consist of black symbols in white squares, set at a top and with red frames. The black symbols indicate the hazard.



The precise nature and severity of the hazard may not be intuitively clear from the symbol alone. It is therefore important to consider the symbol as an alert signal that draws the attention to other information on the label.

The **signal word**, ”Danger” or ”Warning”, indicates the severity of the hazard where ”Danger” signals a more severe hazard than ”Warning”.

Danger **Warning**

The **hazard statement** is a short phrase that explains the nature and severity of the hazard. There are hazard statements for physical hazards, health hazards and environmental hazards.

The precautionary statements give guidance on use and handling as well as emergency response in case of accidents. There are five different types of precautionary statements:

- General precautionary statements;
- Response precautionary statement;
- Disposal precautionary statements.
- Prevention precautionary statements;
- Storage precautionary statements;

GHS Annex 3 contains matrices where the label elements for all hazard classes and each hazard category can be found. GHS Annex 7 provides examples on how the labelling elements can be arranged.

2 What is a Safety Data Sheet?

Safety Data Sheets (SDS) are used to provide more detailed hazard and use information to professional users of chemicals.

The GHS gives guidance on how to prepare the SDS. The SDS should not contradict information given on the label. The SDS acts as a reference source for the management of hazardous chemicals in the workplace, enables an employer to develop an active programme of worker protection measures, and to consider any measures which may be necessary to protect the environment.

A SDS developed in accordance with GHS contains 16 sections:

1	**Identification**
2	**Hazard identification**
3	**Composition/information on ingredients**
4	**First-aid measures**
5	**Fire-fighting measures**
6	**Accidental release measures**
7	**Handling and storage**
8	**Exposure controls/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**

3 GHS and FAO/WHO labelling of pesticides

The **FAO/WHO Guidance on Good Labelling Practice for Pesticides** recommends that hazard classification according to GHS should be used for labelling pesticides.

The revised guidance was published in 2022 and now considers both acute and chronic health hazards. In addition to the GHS label elements, the FAO/WHO Guidance includes colour banding as a means to further communicate the hazard.

Red is used for the most severe hazards, then yellow and finally blue. Grey is used for products that are not classified.

i) GHS – Acute toxicity

	Hazard category					
	Category 1	Category 2	Category 3	Category 4	Category 5	Not classified i.e. toxicity lower than Cat 5
Pictogram/ Symbol					*No pictogram*	*No pictogram*
Signal Word	Danger	Danger	Danger	Warning	Warning	*No signal word*
Hazard Statement						
Oral	Fatal if swallowed	Fatal if swallowed	Toxic if swallowed	Harmful if swallowed	May be harmful if swallowed	
Dermal	Fatal in contact with skin	Fatal in contact with skin	Toxic in contact with skin	Harmful in contact with skin	May be harmful in contact with skin	
Inhalation	Fatal if inhaled	Fatal if inhaled	Toxic if inhaled	Harmful if inhaled	May be harmful if inhaled	
Colour band	PMS red 199 C	PMS red 199 C	PMS Yellow C	PMS Blue 293 C	PMS Blue 293 C	PMS Cool Grey 7C

For more information, please contact UNITAR

The Global Partnership to Implement the GHS | UNITAR

https://unitar.org/sustainable-development-goals/planet/our-portfolio/globally-harmonized-system-classification-and-labelling-chemicals/global-partnership-implement-ghs

or visit the GHS website

https://unece.org/about-ghs

This leaflet is part of a series of leaflets and presentations on the GHS with the following topics:
1) What is the GHS? 2) Hazard classification 3) Hazard communication 4) Implementing GHS and available data on substance classification.