

Example Hazard labels and pictograms

Hazard labels and pictograms form part of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Two sets of labelling and pictograms are included:

- one for the labelling of containers and for workplace hazard warnings,
- and a second for use during the transport of dangerous goods.




Either one or the other is chosen, depending on the target audience, but the two are not used together.







The two sets of labels and pictograms use the same symbols for the same hazards, although certain symbols are not required for transport. Transport pictograms come in wider variety of colours and may contain additional labelling information such as a subcategory number.








Hazard pictograms are one of the key elements for the labelling of containers under the GHS, along with:





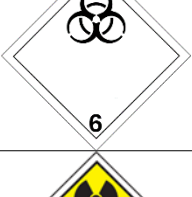


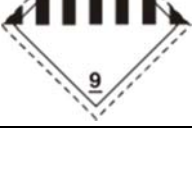
- an identification of the product;
- a signal word – either Danger or Warning – where necessary
- hazard statements, indicating the nature and degree of the risks posed by the product

For examples of pictograms used by the older labelling system under CHIP (Chemicals [Hazard Information and Packaging for Supply] Regulations) see the following (https://en.wikipedia.org/wiki/European_hazard_symbols). CHIP pictograms, as of 01/06/2015, can no longer be used to indicate a hazard, although hazardous substances procured before this date may still display CHIP pictograms.

Globally Harmonized System of Classification		
Containers and workplace hazard warnings		
Pictogram	Signal word	Type of hazardous substance
	Explosive	<ul style="list-style-type: none"> • Unstable explosives • Explosives, divisions 1.1, 1.2, 1.3, 1.4 • Self-reactive substances and mixtures, types A, B • Organic peroxides, types A, B
	Flammable	<ul style="list-style-type: none"> • Flammable gases, category 1 • Flammable aerosols, categories 1, 2 • Flammable liquids, categories 1, 2, 3 • Flammable solids, categories 1, 2 • Self-reactive substances and mixtures, types B, C, D, E, F • Pyrophoric liquids, category 1 • Pyrophoric solids, category 1 • Self-heating substances and mixtures, categories 1, 2 • Substances and mixtures, which in contact with water, emit flammable gases, categories 1, 2, 3 • Organic peroxides, types B, C, D, E, F
	Oxidizing	<ul style="list-style-type: none"> • Oxidizing gases, category 1 • Oxidizing liquids, categories 1, 2, 3 • Oxidizing solids, categories 1, 2, 3

Pictogram	Signal word	Type of hazardous substance
	Compressed Gas	<ul style="list-style-type: none"> • Compressed gases • Liquefied gases • Refrigerated liquefied gases • Dissolved gases
	Corrosive	<ul style="list-style-type: none"> • Corrosive to metals, category 1 • Skin corrosion, categories 1A, 1B, 1C • Serious eye damage, category 1
	Toxic	<ul style="list-style-type: none"> • Acute toxicity (oral, dermal, inhalation), categories 1, 2, 3
	Irritant	<ul style="list-style-type: none"> • Acute toxicity (oral, dermal, inhalation), category 4 • Skin irritation, categories 2, 3 • Eye irritation, category 2A • Skin sensitization, category 1 • Specific target organ toxicity following single exposure, category 3 <ul style="list-style-type: none"> ○ Respiratory tract irritation ○ Narcotic effects
	Health hazard	<ul style="list-style-type: none"> • Respiratory sensitization, category 1 • Germ cell mutagenicity, categories 1A, 1B, 2 • Carcinogenicity, categories 1A, 1B, 2 • Reproductive toxicity, categories 1A, 1B, 2 • Specific target organ toxicity following single exposure, categories 1, 2 • Specific target organ toxicity following repeated exposure, categories 1, 2 • Aspiration hazard, categories 1, 2
	Environmentally damaging	<ul style="list-style-type: none"> • Acute hazards to the aquatic environment, category 1 • Chronic hazards to the aquatic environment, categories 1, 2

Globally Harmonized System of Classification		
Transport of dangerous goods		
Pictogram	Class & Signal word	Type of hazardous substance
	Class 1 Explosives	<ul style="list-style-type: none"> Division 1.1: Substances and articles which have a mass explosion hazard Division 1.2: Substances and articles which have a projection hazard but not a mass explosion hazard Division 1.3: Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard
	Class 2 Flammable gases	<p>Gases which at 20 °C and a standard pressure of 101.3 kPa:</p> <ul style="list-style-type: none"> are ignitable when in a mixture of 13 per cent or less by volume with air; or have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit.
	Class 2 Non-flammable non-toxic gases	<p>Gases which:</p> <ul style="list-style-type: none"> are asphyxiant – gases which dilute or replace the oxygen normally in the atmosphere; or are oxidizing – gases which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does; or do not come under the other divisions
	Class 2 Toxic gases	<p>Gases which:</p> <ul style="list-style-type: none"> are known to be so toxic or corrosive to humans as to pose a hazard to health; or are presumed to be toxic or corrosive to humans because they have an LC₅₀ value equal to or less than 5000 ml/m³ (ppm).
	Class 3 Flammable liquids	Liquids which have a flash point of less than 60°C and which are capable of sustaining combustion
	Class 4 Flammable solids, self-reactive substances and solid desensitized explosives	Solids which, under conditions encountered in transport, are readily combustible or may cause or contribute to fire through friction; self-reactive substances which are liable to undergo a strongly exothermic reaction; solid desensitized explosives which may explode if not diluted sufficiently
	Class 4 Substances liable to spontaneous combustion	Substances which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up in contact with air, and being then liable to catch fire

Pictogram	Class & Signal word	Type of hazardous substance
	Class 4 Substances which in contact with water emit flammable gases	Substances which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities
	Class 5 Oxidizing substances	Substances which, while in themselves are not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material
	Class 5 Organic peroxides	Organic substances which contain the bivalent –O–O– structure and may be considered derivatives of hydrogen peroxide, where one or both of the hydrogen atoms have been replaced by organic radicals
	Class 6 Toxic substances	Substances with: <ul style="list-style-type: none"> • LD₅₀ value ≤ 300 mg/kg (oral) or • LD₅₀ value ≤ 1000 mg/kg (dermal) or • LC₅₀ value ≤ 4000 ml/m³ (inhalation of dusts or mists)
	Class 6 Infectious substances	Infectious substance, affecting humans or animals
	Class 7 Radioactive substances	Materials that emit radiation
	Class 8 Corrosive substances	Substances which: <ul style="list-style-type: none"> • cause full thickness destruction of intact skin tissue on exposure time of less than 4 hours; or • exhibit a corrosion rate of more than 6.25 mm per year on either steel or aluminium surfaces at 55 °C
	Class 9 Miscellaneous dangerous substances and articles	substances and articles which during transport present a danger or hazard not covered by other classes