








GHS HAZARD PICTOGRAMS AND TRANSPORT PICTOGRAMS




Former hazard pictograms

Europe 1999 – 2007

The hazard symbols for chemicals were defined in Annex II of Directive 67/548/EEC. A consolidated list with translations into other EU languages was found in Directive 2001/59/EC

Europe standard Hazard pictograms for labeling – Europe UE 67/548/EEC 1999/45/EC


Hazard pictogram & mention, code Old hazard symbol	Description
	Explosive (E)
	Extremely Flammable(F+)
	Highly Flammable (F)
	Oxidizing (O)
	Toxic(T)
	Very toxic (T+)
	Harmful(Xn)




	Irritant(Xi)
	Corrosive (C)
	Dangerous for the environment (N)

The 'n' in Harmful (Xn) stands for the French word nocif (harmful) and the Italian word nocivo (noxious).

Transport pictograms





Class 1: Explosives


	<p>Usage Explosives</p> <p>Division 1.1: Substances and articles which have a mass explosion hazard</p> <p>Division 1.2: Substances and articles which have a projection hazard but not a mass explosion hazard</p> <p>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</p> <p>Note</p> <p>The asterisks are replaced by the class number and compatibility code</p> <p>Divisions 1.1–1.3</p>
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 <p>Division 1.4</p>	<p>Usage Explosives</p> <p>Substances and articles which are classified as explosives but which present no significant hazard</p> <p>Note</p> <p>The asterisk is replaced by the compatibility code</p>
 <p>Division 1.5</p>	<p>Usage Explosives</p> <p>Very insensitive substances which have a mass explosion hazard</p> <p>Note</p> <p>The asterisk is replaced by the compatibility code</p>
 <p>Division 1.6</p>	<p>Usage Explosives</p> <p>No hazard statement</p> <p>Note</p> <p>The asterisk is replaced by the compatibility code</p>

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Class 2: Gases

 <p>Division 2.1</p>	<p>Usage Flammable gases</p> <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.  <p>Alternative sign</p>
 <p>Division 2.2</p>	<p>Usage Non-flammable non-toxic gases</p> <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;  <p>Alternative sign</p>




Usage
Toxic gases

Gases which:

- 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).

Division 2.3


Classes 3 and 4: Flammable liquids and solids




Usage
Flammable liquids

Liquids which have a flash point of less than 60 °C and which are capable of sustaining combustion

Class 3



Alternative sign



Usage
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

Division 4.1



Division 4.2

Usage

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



Division 4.3

Usage

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



Alternative sign

Other GHS transport classes



Division 5.1

Usage

Oxidizing substances

Substances which, while in themselves not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material

**Usage**

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

Division 5.2

Alternative sign


**Usage**

Toxic substances

Substances with an LD₅₀ value ≤ 300 mg/kg (oral) or ≤ 1000 mg/kg (dermal) or an LC₅₀ value ≤ 4000 ml/m³ (inhalation of dusts or mists)

Division 6.1

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	<p>Usage Corrosive substances</p> <p>Substances which:</p> <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 <p>Class 8</p>
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Non-GHS transport pictograms



The following pictograms are included in the UN Model Regulations but have not been incorporated into the GHS because of the nature of the hazards.

 <p>Class 6.2 Infectious substances</p>	 <p>Class 7 Radioactive material</p>	 <p>Class 9 Miscellaneous dangerous substances and articles</p>
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GHS hazard pictograms

Physical hazards pictograms

 The pictogram shows a black bomb with a lit fuse, surrounded by a red diamond border.	<p>Usage</p> <ul style="list-style-type: none">• Unstable explosives• Explosives, divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6• Self-reactive substances and mixtures, types A, B• Organic peroxides, types A, B
<p>GHS01: Explosive</p>	
 The pictogram shows a black flame, surrounded by a red diamond border.	<p>Usage</p> <ul style="list-style-type: none">• Flammable gases, category 1• Flammable aerosols, categories 1, 2• Flammable liquids, categories 1, 2, 3, 4• Flammable solids, categories 1, 2• Self-reactive substances and mixtures, types B, C, D, E, F• Pyrophoric liquids, category 1• Pyrophoric solids, category 1• Combustible solids, category 3• Combustible liquids, category 3• 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
<p>GHS02: Flammable</p>	



Usage

- Oxidizing gases, category 1
- Oxidizing liquids, categories 1, 2, 3
- Oxidizing solids, categories 1, 2, 3

GHS03: Oxidizing



Usage

- Compressed gases
- Liquefied gases
- Refrigerated liquefied gases
- Dissolved gases

GHS04: Compressed Gas



Usage

- Corrosive to metals, category 1




GHS05: Corrosive

no pictogram
required

Usage


- Explosives, divisions 1.5, 1.6
- Flammable gases, category 2
- Self-reactive substances and mixtures, type G (see HAZMAT Class 4 Flammable solids)
- Organic peroxides, type G

Health hazards pictograms


 <p>GHS06: Toxic</p>	<p>Usage</p> <ul style="list-style-type: none">• Acute toxicity (oral, dermal, inhalation), categories 1, 2, 3
 <p>GHS07: Harmful</p>	<p>Usage</p> <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 <p>Not used</p> <ul style="list-style-type: none">• with the "skull and crossbones" pictogram• for skin or eye irritation if:<ul style="list-style-type: none">◦ the "corrosion" pictogram also appears◦ the "health hazard" pictogram is used to indicate respiratory sensitization
 <p>GHS08: Health hazard</p>	<p>Usage</p> <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

<p>no pictogram required</p>	<p>Usage</p> <ul style="list-style-type: none"> • Acute toxicity (oral, dermal, inhalation), category 5 • Eye irritation, category 2B • Reproductive toxicity – effects on or via lactation
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Physical and health hazard pictograms

 <p>GHS05: Corrosive</p>	<p>Usage</p> <ul style="list-style-type: none"> • Explosives, divisions 1.5, 1.6 • Flammable gases, category 2 • Self-reactive substances and mixtures, type G (see HAZMAT Class 4 Flammable solids) • Organic peroxides, type G • Skin corrosion, categories 1A, 1B, 1C • Serious eye damage, category 1
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Environmental hazards pictograms

 <p>GHS09: Environmental hazard</p>	<p>Usage</p> <ul style="list-style-type: none"> • Acute hazards to the aquatic environment, category 1 • Chronic hazards to the aquatic environment, categories 1, 2 • Environmental toxicity, categories 1, 2
<p>no pictogram required</p>	<p>Usage</p> <ul style="list-style-type: none"> • Acute hazards to the aquatic environment, categories 2, 3 • Chronic hazards to the aquatic environment, categories 3, 4