










## Classification of hazardous substances according to CLP and ADR

This appendix shows the classification of hazardous substances according to the CLP and ADR. These classification systems differ from each other. The CLP regulation is the classification rules for hazardous substances with a negative effect on people and the environment. The ADR focuses on a safe and responsible way of transport and storage of hazardous substances and deals with unforeseen emergencies with sealed packaging during transit.

The GHS (Globally Harmonized System of Classification and Labelling of Chemicals) has been adopted in the CLP Regulation. Approximately, the CLP classification can be translated into ADR classes according to the diagram below. This model makes a *rough* comparison possible. However, the **model is not intended to divert ADR classes from CLP categories**. For example, it is possible that a substance from the CLP classification is provided with 2 symbols (highly flammable and toxic). Since a substance can only fall into one ADR class, the Safety Data Sheet must always be consulted.

Classification GLP				Classification ADR	
Symbol	Inter-pretation	Category	Meaning	Category	ADR class
	GHS01	Explosive	Symbol for explosive substances; for self-reactive substances; for organic peroxides.	Explosive substances and objects	1
	GHS02	Flammable	Symbol for flammable gases; for flammable aerosols; for flammable liquids; for flammable solids; for self-reactive substances; for pyrophoric substances; for self-heating substances; for substances that can emit flammable gases on contact with water; and organic peroxides.	Flammable liquids Flammable solids Substances liable to spontaneous combustion Substances that emit flammable gases on contact with water	3 4.1 4.2 4.3
	GHS03	Oxidising	Symbol for oxidising gases, for oxidising liquids and solids.	Oxidising Organic peroxides	5.1 5.2

Classification GLP				Classification ADR	
Symbol	Interpretation	Category	Meaning	Category	ADR class
	GHS04	Gases under pressure	Symbol for gases: compressed gas, liquified gas, highly cooled liquified gas and dissolved gas.		
	GHS05	Corrosive	Symbol for corrosive substances that affect metals, and for corrosive substances that can seriously affect the skin, including substances that can cause serious eye damage.	Corrosive substances	8
	GHS06	Toxic	Symbol for acutely toxic substances.	Toxic substances	6.1
	GHS07	Irritating, Sensitizing, Harmful	Symbol for acutely toxic substances; for skin and eye irritants; for airway irritants; for skin sensitizing substances; for substances with a specific target organ toxicity; and for substances with a narcotic effect.	Partly toxic substances Partly corrosive substances, i.e. where metal corrosion is involved	6.1 8
	GHS08	Long-term health hazards	Symbol for carcinogens; for mutagenic substances; for reproductive toxic substances; for substances that can affect a specific target organ (after single or repeated exposure); and for substances where danger of choking (aspiration) may occur.	See <a href="#">KAM rule 07 Disposal of (hazardous) waste</a>	
	GHS09	Hazardous to the aquatic environment	Symbol for substances that are acutely hazardous to the aquatic environment, as well as those that are chronically hazardous.	Various hazardous substances and objects	9
				Gases	2
				Infectious substances (contaminated substances)	6.2
				Radioactive substances	7

Reference:

CLP Regulation classification rules and labeling of hazardous substances

[CLP | Risk of substances \(rivm.nl\)](#)

ADR

Introduced in the Dutch Law Vervoer Gevaarlijke Stoffen ( WVGS Wet Vervoer Gevaarlijke Stoffen )

[ADR 2021](#)