UNITI Bundesverband
mittelständischer
Mineralölunternehmen e. V.

UNITI information

Labelling of mineral oil products, lubricants and operating fluids according to CLP (EU GHS)

Principles

The label on the packaging of hazardous chemicals should provide essential information on the hazards and the most important precautionary statements to persons who handle a substance or a mixture (new term for 'preparation').

The Globally Harmonized System of classification and labelling of chemicals (GHS) has been agreed within the United Nations (UN) to facilitate international trade while protecting human health and the environment. In the European Union (EU) the worldwide GHS is implemented by the CLP Regulation (EC) No 1272/2008 which was published on 31 December 2008 and came into force on 20 January 2009. CLP stands for 'Classification, Labelling and Packaging of substances and mixtures'.*

There are different transitional periods for substances and mixtures for the implementation of the CLP Regulation:

- **since 1 December 2010 substances and**
- **from 1 June 2015 mixtures have to be classified and labelled according to CLP.**
  (The CLP classification and labelling is already permitted since 20 January 2009.)

Mixtures which were placed on the market with the labelling according to the Dangerous Preparations Directive (DPD) before 1 June 2015 need not to be re-labelled according to CLP until 1 June 2017.

The required labelling according to CLP for substances and mixtures placed on the market within the deadlines is under the responsibility of the suppliers. Meeting the CLP obligations for labelling is not only relevant for the manufacturers and importers of chemicals but also for formulators, refillers and distributors.

Labelling according to CLP

According to the CLP Regulation a substance or a mixture classified as hazardous, which will be placed on the market, has to be labelled with elements shown in Figure 1 demonstrated on an example mixture.

In comparison to the old law (DPD) a number of changes are introduced by the CLP labelling provisions. Hazard pictograms will be used instead of hazard symbols. Risk phrases are replaced by hazard statements and safety advices are replaced by precautionary statements. Certain supplemental hazard information has been provided by EUH statements in the EU system. Furthermore, two signal words have been introduced by CLP: 'Danger' and 'Warning'. 'Danger' is used for severe hazards (e.g. corrosive chemicals) and 'Warning' is used for less severe hazards (e.g. irritant chemicals). The CLP pictograms consist of red framed diamonds with black symbols on a white background. The hazard pictograms according to GHS/CLP and their codes and identification are shown in Figure 3. For most of the CLP hazard pictograms there is a corresponding hazard symbol in the old DPD labelling system. The new pictograms are 'gas cylinder', 'exclamation mark' and 'health hazard'; the so-called 'St. Andrew's cross' of the old system won't be used under GHS/CLP. While the hazard pictograms, hazard statements, EUH statements and the signal word stated on the label for a given classification (hazard class/category) are clearly defined, the CLP Regulation only provides recommendations for the precautionary statements. The selection of the relevant precautionary statements is under the responsibility of the supplier. Therefore, different precautionary statements on the label for comparable products may result. However, the ECHA Guidance on Labelling and Packaging in accordance with Regulation (EC) No 1272/2008 includes selection tables with useful recommendations on relevant precautionary statements for each hazard class/category.*

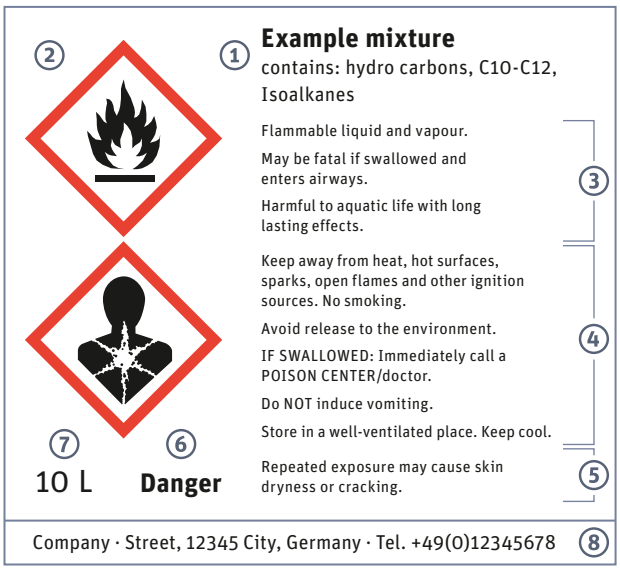
Certain mixtures containing specific hazardous substances shall be labelled with special EUH statements, even if the mixtures are not classified as hazardous. Particularly relevant for lubricants and mineral oil products are: EUH208 – 'Contains (name of sensitising substance). May produce an allergic reaction.' and EUH210 – 'Safety data sheet available on request.'

Figure 1: Elements of the CLP label**

① Product identifiers:
- for substances: name of the substance and identification number
- for mixtures: trade name or designation of the mixture and the identity of substances in the mixture that contribute to specific health hazards

② Hazard pictograms
③ Hazard statements
④ Precautionary statements
⑤ Supplemental information (e.g. EUH statements)
⑥ Signal word: "Danger" or "Warning"
⑦ Nominal quantity of the substance or mixture in the package made available to the general public
⑧ Name, address and telephone number of the supplier

The elements 2, 3, 4, 5 and 6 shall be specified, where applicable.



Relevant changes under the new law (CLP)

Besides the labelling also the system, the methods and criteria of the classification of chemicals has been changed. Several changes of the classification criteria may cause that not hazardous classified chemicals under the old law will be identified as hazardous according to CLP or that chemicals will be classified more strictly under the new law and labelled with different or more hazard pictograms.

For example, the flash point limit for the classification of liquids as flammable has increased from 55°C (old law) to 60°C (CLP), that means liquids with a flash point from > 55°C till 60°C are regarded as flammable liquids according to CLP and must be labelled with the hazard pictogram 'flame'.

There are also relevant changes for several health hazards, for example, for acute toxicity, corrosion and irritation of skin and eye as well as aspiration toxicity. Under the new law, chemicals can be allocated to one of four acute toxicity categories based on classification limits which partly differ from the old law. Mixtures containing corrosive or irritant components are to be classified more severely under CLP in several cases because concentration limits have partly decreased significantly.

The modified classification criteria of aspiration toxicity are of particular importance for mineral oil products and lubricants. Aspiration means the entry of liquids into the trachea and the lower respiratory system. Hydrocarbons with a low viscosity can cause human aspiration toxicity hazards including severe acute effects on the lungs. According to the old EU law substances and mixtures are regarded as aspiration toxic if they contain hydrocarbons in a total concentration of 10% at least and their kinematic viscosity is < 7mm²/s at 40°C. They must be labelled with the hazard symbol Xn and the risk phrase R65 'Harmful: May cause lung damage if swallowed.' Under GHS/CLP the classification criterion of the kinematic viscosity increases to <= 20,5 mm²/s at 40°C. That means mixtures containing 10% or more of hydrocarbons are to be classified as aspiration toxic if the kinematic viscosity of the mixture is <= 20,5 mm²/s at 40°C. This significant tightening of the classification criteria may cause that not hazardous classified products according to the old law will become aspiration toxic according to CLP and have to be labelled correspondingly, even if the composition of the products has not changed. This may affect for example metal working oils, hydraulic fluids and other functional fluids on a hydrocarbon base, which contain mineral oils or polyalphaolefines. If such products meet the specified CLP criteria for aspiration hazard the new labelling as aspiration toxic chemical shall be indicated on the packaging from 1 June 2015. Only if the above mentioned transitional regulations for mixtures already placed on the market with DPD labelling are applicable, the date will be postponed for 2 years to 1 June 2017.

Figure 2 shows elements of the CLP labelling for aspiration toxic substances and mixtures. It should be noted that for selecting the precautionary statements the user groups (industrial/professional users or general public) should be taken into account.

Figure 2: CLP labelling elements for aspiration hazard**

Hazard pictogram:

- Signal word: **Danger**
- Hazard statement: **H304** May be fatal if swallowed and enters airways.
- Precautionary statements: **P301+P310** IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
  P331 Do NOT induce vomiting.
  P405 Store locked up.
  P501 Dispose of contents/container to...
  (in accordance with local/regional/national/international regulations (to be specified))

P301+310 and **P331** are highly recommended for all users (industrial, professional, consumers).
P405 and **P501** are highly recommended for the general public.

Note: The figure does not include all elements of a complete label.

CLP information to consider in the safety data sheet

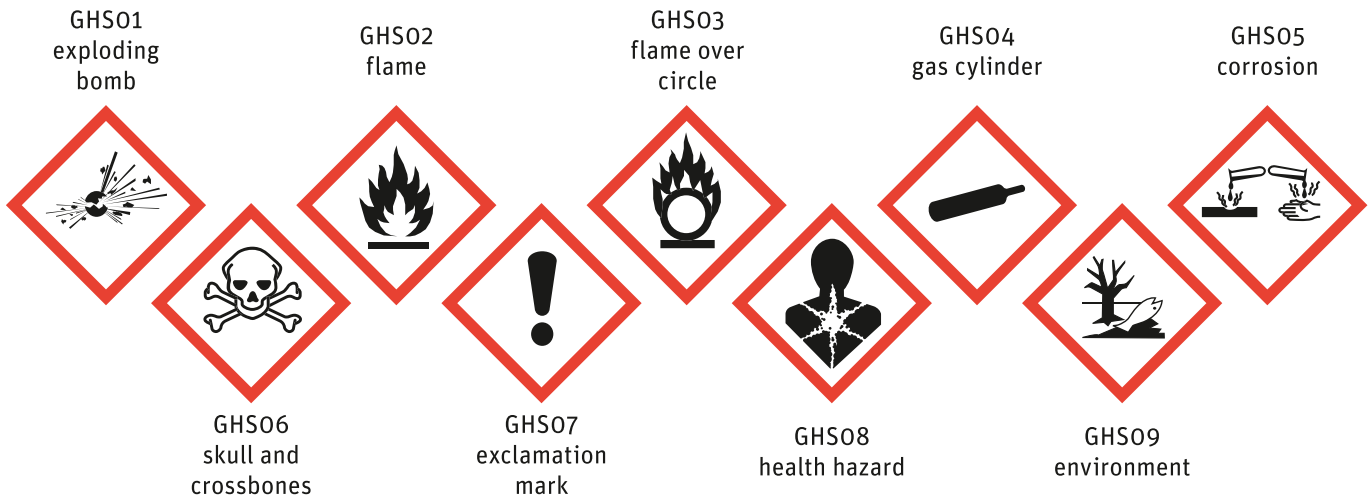
In addition to the new label, CLP effects the information in the safety data sheet, whose requirements are defined in Annex II of the REACH Regulation as amended by the Regulation (EU) No 453/2010.*

As of 1 June 2015 the CLP classification and labelling of mixtures shall be stated in section 2 ('Hazards identification') of the safety data sheet; this came already into force for substances on 1 December 2010. It is necessary to ensure that the information in section 2 of the safety data sheet for CLP labelling (hazard pictograms or symbols, signal word, hazard statements and precautionary statements) comply with the CLP label. Furthermore, in the case of a mixture the CLP classification for hazardous components shall be specified in section 3 ('Composition/information on ingredients') of the safety data sheet.

* The CLP Regulation (EC) No 1272/2008, the amendments of CLP by ATPs (Adaptation to Technical Progress), the ECHA Guidance on Labelling and Packaging, the REACH Regulation and the Regulation (EU) No 453/2010 are available on the website of ECHA (European Chemicals Agency): echa.europa.eu/regulations

** The given hazard, precautionary and EUH statements take into consideration the amendments of the CLP Regulation up to the 6th ATP, June 2014

Figure 3: GHS/CLP hazard pictograms with codes and identification



UNITI Portrait

UNITI Bundesverband mittelständischer Mineralölunternehmen e.V. is the German association of small and medium-sized companies in the fuels, lubricants and heating fuels sector. UNITI promotes the interests of its members on a professional, economic and vocational level. It represents the interests of approximately 1,500 mineral oil companies – which accounts for 90 percent of organized small and medium-sized enterprises in the petroleum and fuel business in Germany. At present, about 5,700 road petrol stations (39 percent of the German road petrol market) and about 120 petrol stations at federal motorways are operated by its members.

UNITI is an association which numerous independent small and medium-sized lubricant manufacturers and retailers all over Germany belong to. These independent manufacturers currently have a market share of over 50 percent. With high performance automotive and industrial lubricants, coolants and other operating fluids, the UNITI members are an essential part of the manufacturing industry and ensure a consistently high technology standard.

Furthermore, UNITI represents a large number of producers and suppliers of additives. These products are designed to optimize the requirements of modern fuels and lubricants.

The member companies employ about 75,000 people and the total turnover of the companies is about €35 billion per year.

More information about UNITI and the various events and training courses provided by UNITI is available at: www.uniti.de/uniti-gruppe

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