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Simplified DGUV labeling system for standing bottles in laboratories

1. Introduction

Taking into account the CLP regulation (**C**lassification, **L**abelling and **P**ackaging), a simplified labeling system for standing bottles in laboratories was developed. A concept that, in addition to the pictograms, also uses keywords on the sticker has proven to be effective. The core element of this system are pictogram phrase combinations.

The information content of the H-phrases was compressed and converted into so-called phrases. For the practical implementation we provide self-adhesive pictograms with phrases. A laboratory-friendly selection of more and less frequently required pictogram phrase combinations can be ordered in two different sizes from the DBMR Supply Center. Compared to the self-adhesive stickers based on the old labeling system, the number of sticker types available to choose from has only increased slightly. The creation of a label is therefore reduced to filling out the label with

- the substance name
- the company name and art.-no.
- CAS-No.
- the name of the contact person
- Fill date
- If necessary, other internal laboratory information, such as a container number
- sticking on usually up to three pictogram phrase stickers

2. Explanations on the application of the simplified labeling system

- The characteristic “Explosive” can be used as a collective characteristic; relevant additional information is not obtained in the laboratory by grading H200ff, H240.
- For the flammability and risk of ignition, it is sufficient in the laboratory to differentiate between “extremely flammable” and “highly flammable”); flammability with water is counted as extreme flammability. Self-igniting substances are given their own phrase.
- The H-statements for carcinogenic, germ cell mutagenic and reproductive toxic effects are reduced to the two levels “CMR substance cat. 1” and “CMR substance cat. 2”.
- The H-statements for specific target organ toxicity (STOT) are condensed into the two statements “Damages organs” for category 1 and “May cause damage to organs” for category 2. There is no need to distinguish in the laboratory whether this applies to a single

or repeated exposure. Category 3 STOT, respiratory irritation, can be covered with the phrase “Irritating”, the effect on the central nervous system is given the new phrase “Anesthetic”.

- The “corrosive and irritating effects” on the skin and eyes are not differentiated in each case, as there is a constant obligation to wear safety glasses in the laboratory.
- As a rule, the “environmental” pictogram can be dispensed with in laboratories due to the basic professional disposal. If water hazards are to be pointed out, the self-explanatory pictogram “environment” can be used without an additional phrase.
- The “exclamation mark” pictogram with the text phrase “Ozone damaging” can also be omitted. This hazard class only affects a small number of substances whose use is strictly regulated by law. Laboratories that handle these substances must provide employees with special training.
- In laboratories, labeling with up to three pictogram phrase combinations for the main hazards is sufficient; in individual cases it can be up to four pictogram phrase combinations.

3. Indication of exposure pathways

An additional sticker is offered on which the relevant exposure pathways can be selected by checking them.

4. Additional stickers

- “Evolves toxic gases with water or acid”
  (Note: Distinguishing based on toxicity is not helpful in laboratory practice)
- “Explosive when dry”
  (Note: Note for existing containers on the loss of phlegmatization)
- “Reacts violently with water”
- “May age dangerously”
  (Note: absorbs peroxide formation and other dangerous changes upon standing).

5. Sticker collection sheets

The following sticker collection sheet can be ordered free of charge from the DBMR supply center in two different sticker sizes 33mm x 33mm (48 stickers) resp. 17 mm x 22 mm (42 stickers).