

# Information Sheet

## Simplified labeling of hazardous substances in laboratory containers

***If hazardous substances are transferred from the original containers to other containers (e.g. reagent bottles, etc.), these containers must be labeled correctly. Since numerous, frequently modified substances are refilled into other containers in laboratories, extensive GHS-compatible labeling is often difficult and not practicable in everyday laboratory work.***

*For this reason the German Statutory Accident Insurance (DGUV) has devised a simplified labeling system, which has been adopted at ETH (“Working Safely in Laboratories – Basic Principles and Guidelines“, DGUV Information 213-850, valid as of 04/1. Available online at <http://bgi850-0.vur.jedermann.de/index.jsp>).*

**The following information (1-4) are required on the container label:**

- 1) Substance name or rather the relevant contents of mixtures**
- 2) Pictograms according to GHS and phrases**

Up to three pictograms of the main hazards regarding health and physical risks. Pictogram adhesive labels are available from SSHE on request.

The H-statements are summarized in phrases.

- The term “explosive” can be used collectively. Relevant information is not gained in the laboratory by sub-classifications such as H200ff or H240.
- For flammability and ignition hazards, it is sufficient in the laboratory to differentiate between “extremely flammable” and “(easily) flammable”. The flammability with water is considered to be extremely flammable. Self-igniting substances get a separate phrase.
- The H-statements regarding carcinogenic, mutagenic effects or toxic effects to reproduction are reduced to the two levels “CMR substance Cat. 1” and “CMR substance Cat. 2”.

- The H-statements on specific target organ toxicity (STOT) are condensed to two statements: “Damages organs” for Category 1 and “May damage organs” for Category 2. In the laboratory, it is not necessary to differentiate if this occurs due to single or repeated exposure. Category 3 STOT, respiratory irritant, is covered with the phrase “Irritant”. Substances that affect the central nervous system receive the new phrase “Neurotoxic”.
- One does not differentiate between “corrosive and irritating effect” on skin and eyes since it is mandatory to wear safety goggles in the laboratory.
- As a rule, the “Environment” pictogram is not required due to the generally proper disposal in laboratories. If it is appropriate to indicate the hazard to water, the self-explanatory “Environment” pictogram may be used without any additional phrase.
- The “Exclamation mark” pictogram with the text phrase “Ozone damaging” can be omitted, too. This hazard category pertains to a small number of substances only, whose use is strictly regulated by law. Persons working with these substances in laboratories must receive special instruction.

**In addition, there are special phrases for certain potential hazards:**

- “Develops toxic gases on contact with water or acids” [Note: Explicitly differentiating between the levels of toxicity is not useful for laboratory work].
- “Explosive in dry state” [Note: For stock containers which may lose their phlegmatization].
- “Reacts violently with water”.
- “Can age dangerously” [Note: Risk of peroxide formation and other dangerous changes when standing].

**Pictograms and phrases are accessible on the following sites:**




- <https://www.bgrci.de/fachwissen-portal/topic-list/laboratories/guidelines-for-laboratories/simplified-labelling-of-laboratory-containers/>

**3) Signal word (optional)**

“Danger“ or “Caution“

**4) Name of owner or work group, date of filling**

Example: Labeling of n-heptane

| n-Heptane   |   |  |
|---|---|--|
|  |  |  |
| easily flammable  | Aspiration<br>perilous  | anesthetic   |
| <b>Danger</b>   |   |  |
| Name: Max Muster  | Datum: 01.01.2018   |  |

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Status: 01.10.2018