

## Information on storage of hazardous materials

How to store flammable and water polluting liquids according to regulations.

**In general, please observe the specific regulations, provisions and laws with regard to approvals and stipulated capacities, etc.**

### Installation and storage of sump trays

To protect groundwater, containers utilised for the storage of flammable or water hazardous liquids must be secured against leakage by means of an appropriate sump tray.

Sump trays should only be located on a flat surface under cover.

In accordance with COSHH guidance, a sump tray must be able to accommodate the contents of the largest container or at least 10% of the total quantity stored.

### Example

#### Storage of 2 drums, each with 200 litre capacity

– Overall storage quantity = 400 litres, of which 10% = 40 litres

– Largest container = 200 litres

#### Mandatory sump tray capacity = 200 litres

#### Note!

If the total volume of a hazardous chemical is large (CTC or IBC), the sump should be sized to contain 100% of the volume of the containers stored upon it.

**Steel sump trays** for the storage of flammable liquids in GHS categories 1 – 3 as well as water hazardous liquids in GHS categories 1 – 4.

**PE sump trays** for the storage of water hazardous liquids in GHS categories 1 – 4. Not approved for the storage of flammable media in Germany.

### Resistance of the materials

The corrosion resistance of the sump tray materials used and their suitability for use with the stored media must be certified.

**This is the user's responsibility.**

Please always observe the lists of resistant materials and safety data sheets (CHIP) for the material to be stored.

#### Tip

Unless otherwise stated in the list of resistant materials, the material for the sump can usually be the same as the material used to manufacture the storage container.

### Glossary of terms and abbreviations used

<b>ADR / RID</b>	Regulations for international transport of hazardous material by rail and road
<b>BetrSichV</b>	Company safety directive
<b>DIBt</b>	German Institute for Construction Technology
<b>GGVSEB</b>	Regulations for transporting hazardous material by rail, road and inland waterway
<b>GHS</b>	Globally Harmonized System of Classification and Labelling of Chemicals. Standardised international system for the classification and labelling of chemicals (substances and mixtures).
<b>IBC / CTC</b>	Intermediate Bulk Container / Cubic Tank Container. Internationally approved bulk packaging containers for liquid hazardous goods.
<b>StawaR</b>	Steel sump directive (up to 1000 litres)
<b>TRbF</b>	Technical regulations for combustible liquids
<b>TRG</b>	Technical regulations for compressed gases
<b>ÜHP</b>	Manufacturer's declaration of conformity following product testing by a recognised institution
<b>WHG</b>	Water Management Act

This information applies only to Germany, is not liable for completeness and is not binding.

As a general rule, please observe local regulations.

Your local authority will be able to provide detailed information.

Additional hazardous goods symbols (GHS)



## Guide to hazardous goods storage

Regarding suitability and **resistance** requirements, the hazard symbols for various media to be stored are shown below (these symbols can also be found on hazardous material containers).

Regarding **certification**, the logos for the relevant test certificates are also shown.

### Certifications



### American (U.S.A) test certificates



Factory Mutual  
(independent testing agency)



Occupational  
Safety and Health Agency  
National Fire Protection  
Agency



Environmental Protection  
Agency



Uniform Fire Code

### Classification / labelling of water hazardous liquids

AS YET according to WHG (until 30/11/2010)


Classification	Hazard symbol	R set	Hazard category
severe water hazard		–	WHC 3
water hazard		R 50, R 50/53, R 51/53	WHC 2
slight water hazard		R 52/53, R 53	WHC 1

NEW according to GHS / REACH (effective 01/12/2010)


Classification	Hazard symbol	H set	Hazard category
acute water hazard		H 400	GHS category 1
chronic water hazard		H 410	GHS category 1
chronic water hazard		H 411	GHS category 2
chronic water hazard		H 412	GHS category 3
chronic water hazard		H 413	GHS category 4

### Classification / labelling of flammable liquids

AS YET according to GefStoffV (until 30.11.2010)

Classification	Hazard symbol	Criteria	R set
highly flammable		flash point > 0 °C, boiling point ≤ 35 °C	R 12
flammable		flash point > 21 °C	R 11, R 15, R 17
combustible		flash point ≥ 21 °C, ≤ 55 °C	R 10

NEW according to GHS / REACH (effective 01/12/2010)

Classification	Hazard symbol	Criteria	H set	Hazard category
highly flammable		flash point > 23 °C, boiling point ≤ 35 °C	H 224	GHS category 1
easily flammable		flash point > 23 °C, boiling point > 35 °C	H 225	GHS category 2
flammable		flash point ≥ 23 °C, ≤ 60 °C	H 226	GHS category 3