
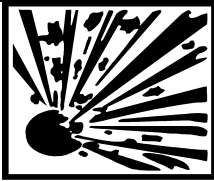




Hazardous materials

Danger	Promotes fire	Danger of explosion	Highly flammable
Symbol			
Character	O	E	F

Hazardous materials in your company

- 
- **Characterisation**
 - **labelling**
 - **evaluation**
 - **information sources**
 - **legal compliance**
 - **handling (careful and preventive)**
 - **storage and transport**
 - **working instructions**

Types of hazardous materials

(according to Austrian law)

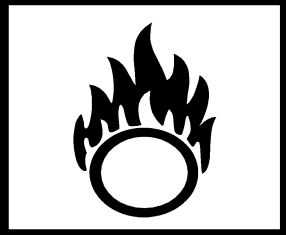
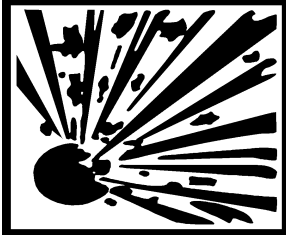
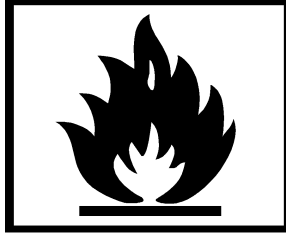
- **Danger of fire and explosion**
- **Dangerous to health**
- **Dangerous to the environment**





Rules for labelling of materials with danger of fire

- **Identification of Danger**
- **Symbol for danger**
- **Identification character**
- **R- + S-phrases**
- **Classification according to „regulation for flammable liquids“**

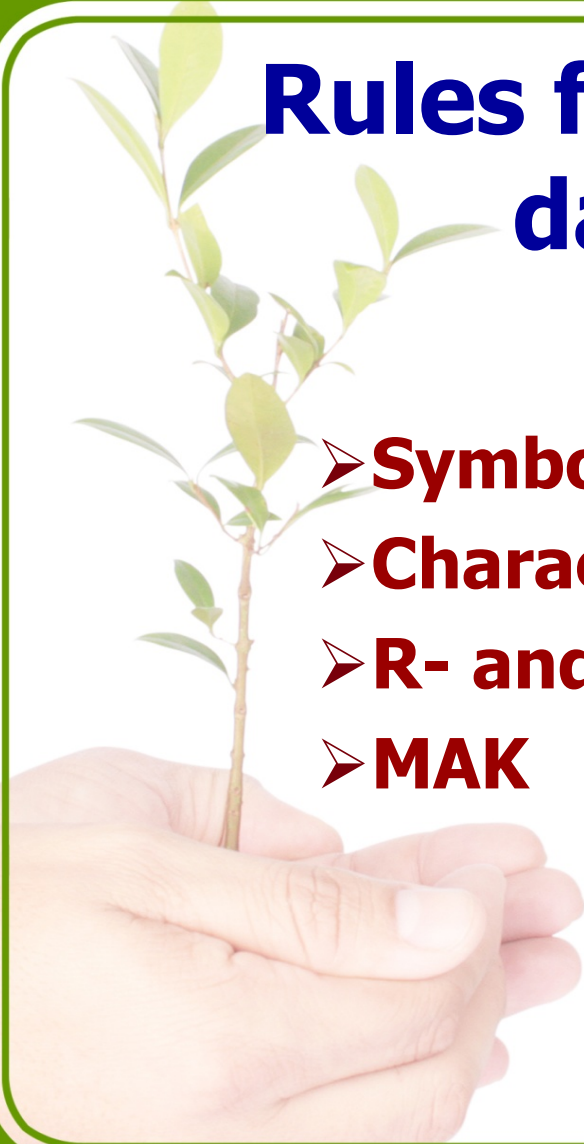
Danger of fire and explosion

Danger	Promotes fire	Danger of explosion	Highly flammable
Symbol			
Character	O	E	F

Classification according to regulation for use of chemicals

Classification	Highly flammable	Easily flammable	flammable	
Symbol			No symbol	No symbol
Character	F+	F	-	-
Risk phrase	R 12	R 11	R 10	-
Flash point	< 0°C	0 - 21°C	21 - 55°C	55 - 100°C
Identification according to regulation for flammable liquids	A I (n. water soluble.) B I (water soluble.)	A I (n. soluble.) B I (soluble.)	A II (n. soluble.) B II (soluble.)	A III (n. soluble.)
Examples	Acetylen, Ether	Gasoline, Acetone	Butylacetate	n-Undecan

Rules for labelling of materials dangerous to health

- 
- **Symbol**
 - **Character**
 - **R- and S-phrases**
 - **MAK**



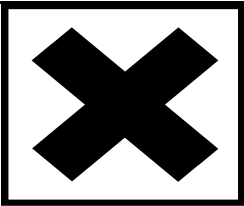
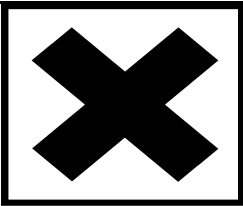

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Danger to health

Very toxic	toxic	Dangerous to health	irritating	corrosive
				
Character T+	Character T	Character Xn	Character Xi	Character C
e. g. cyanide	e.g. methanole	e. g. toluene	e. g. acrylate	e. g. chloric acid


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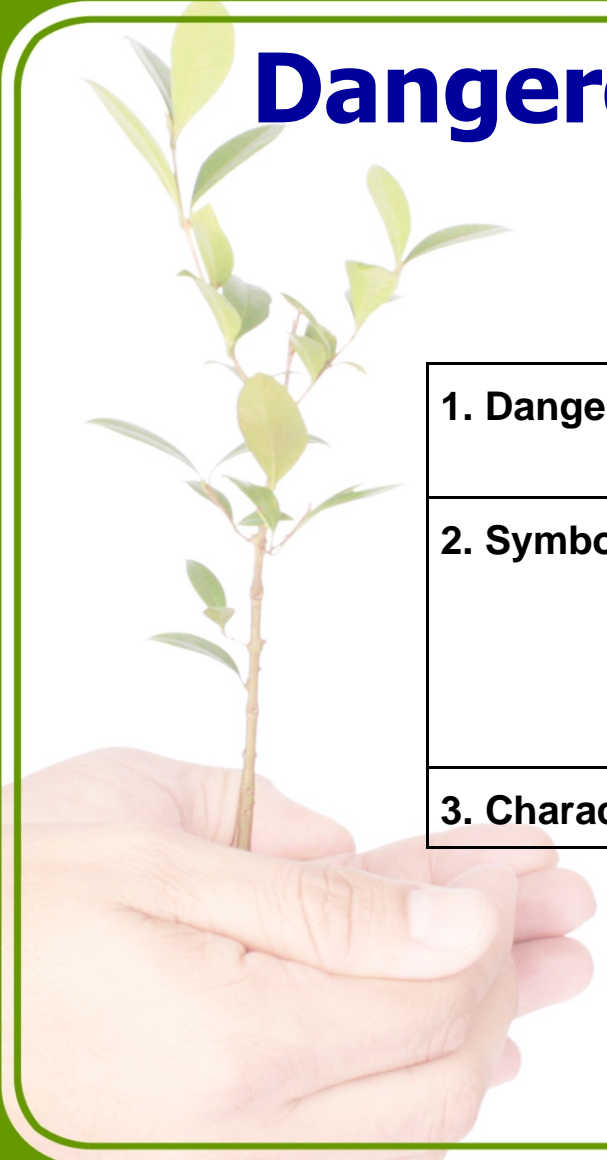
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Dangerous to the environment

1. Danger	Dangerous to the environment
2. Symbol	
3. Character	N



Sources of information

- **Label on product**
- **Material Safety Data Sheet (MSDS)**
- **Internet:** International Occupational Safety and Health Information Centre (CIS)
(<http://www.ilo.org/public/english/protection/safework/cis/index.htm>)

Product labelling according to the Austrian „Regulation for use of chemicals“

- **Name of the substance or the hazardous material contained including mass percentage**
- **name, address, phone of the producing company or the importer,**
- **symbol, character and characterization of the danger associated with the product,**
- **R-phrases - standards identification of dangers,**
- **S-phrases - standard identification of safety measures,**
- **advice for measures in the case of accidents,**
- **advice for safe disposal of the product,**
- **the number of the material (according to ELINCS or EINECS)**

Material Safety Data Sheet

1. Identification :

- Name of the substance or preparation
- Name, address and telephone number of the company/supplier/undertaking

2. Composition and information on ingredients

3. Hazards identification

4. First-aid measures

5. Fire-fighting measures

6. Spillage, accidental release measures

7. Handling and storage

8. Exposure controls and personal protection

9. Physical and chemical properties

10. Stability and reactivity

11. Toxicological information

12. Ecological information

13. Disposal considerations

14. Transport information

15. National regulations and references

16. Other information

STORAGE RULES OF HAZARDOUS MATERIALS

	C	X _i , X _n	T, T ⁺	F, F ⁺	O	E
	+	+	○	-	-	-
	+	+	+	+	○	-
	○	+	+	○	-	-
	-	+	○	+	-	-
	-	○	-	-	+	-
	-	-	-	-	-	+

+ May store together

- Should not be Stored together

○ Can store together under specific provisions, please pay attention to the material data sheets

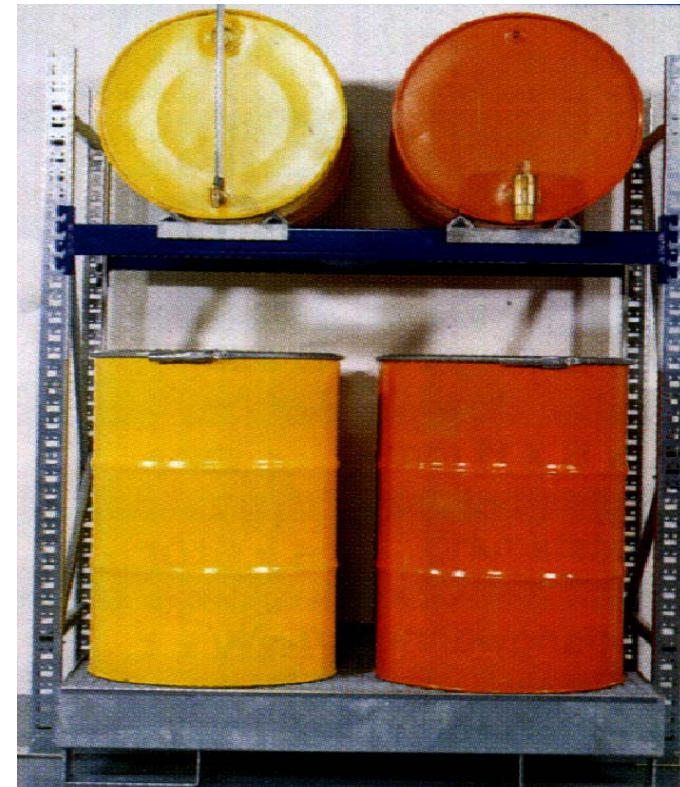
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Storage



„workers“ safety act

- **Duty for identification and characterisation for the employer (list of hazardous substances)**
- **Duty to define measures for safety and protection of health in the workplace**
- **Duty to document the measures**
- **Duty to substitute dangerous materials**
- **Register of employees (including special dangers and specific measures)**

Hazardous materials in your company

- 
- **Characterisation**
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 - **legal compliance**
 - **handling (careful and preventive)**
 - **storage and transport**
 - **working instructions**