Federal Institute for Occupational Safety and Health

Workplace risk assessment

Workshop REACh2SDS
Dortmund, 27-28.09.2021

Speaker:
Melanie Berghaus

Legal basis of the risk assessment

**“Framework Directive”
for occupational safety and health
89/391/EEC**

Occupational Health and Safety Act

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Hazard factors

Mechanical factors	Electronic factors	Thermal factors	Climate	Lighting	Colours
Working in a damp environment	Working with positive or negative pressure	Vibration	Sound	Radiation	Fires, explosions
Hazardous substances	Biological agents	Physical stress/ heaviness of work	Mental stress	People	Animals

Multifactorial hazards

Organisation is a matter for the boss

The employer organises through operational management structures and appropriate procedures

Determination, implementation and compliance with the measures

Basic requirements

Good Organisation

Financial, human, material and time resources are available

Images: https://pixabay.com/de/

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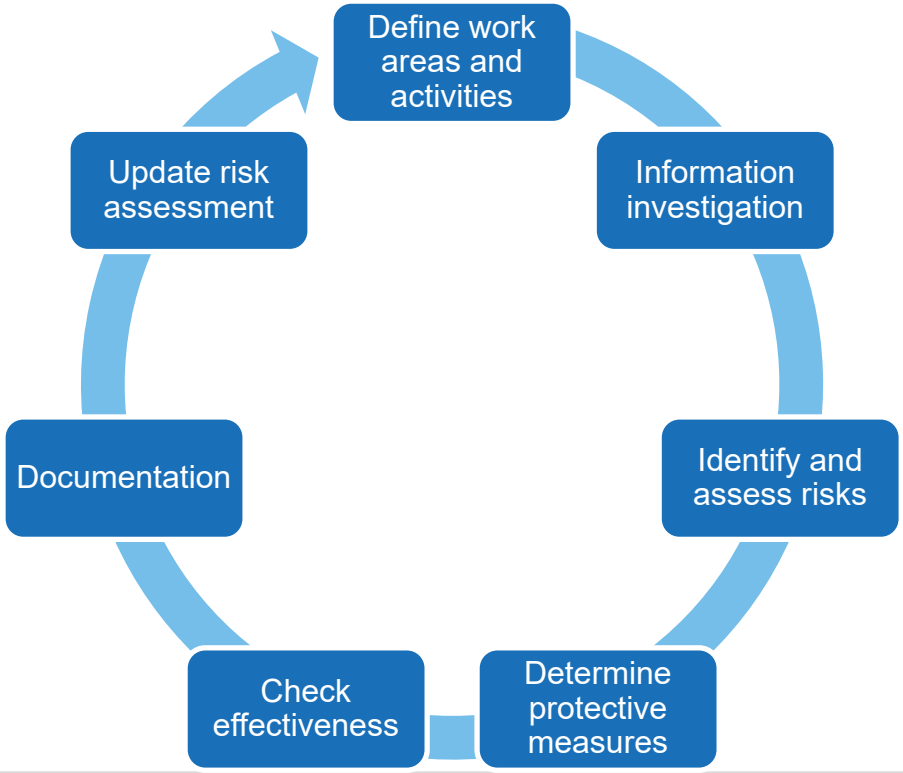
The risk assessment cycle



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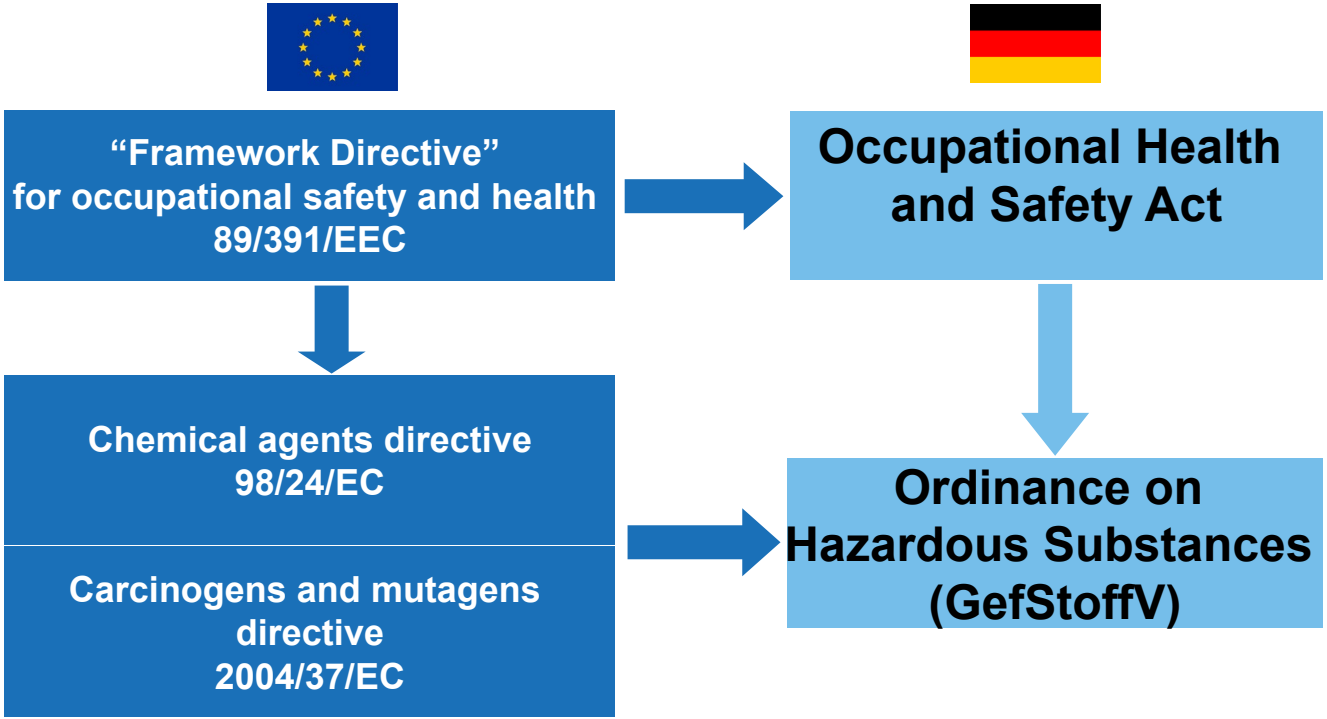
Multifactorial hazards

Legal basis of the risk assessment



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What are hazardous substances?

https://pixabay.com/de/

CLP Pictograms									
Hazard pictograms									
Description	Explosive bombe	Flame	Flame over circle	Skulls and Crossbones	Health hazard	Corrosion	Exclamation Mark	Gas cylinder	Environment

Minimum standards

- **Organisational and hygiene measures**
  - CAD Article 5 / GefStoffV §6

... must always be implemented

Image: https://pixabay.com/de/

Image: K. Braesch

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Procedure for risk assessment

Hazard information

Classification, Occupational exposure limit values, assessment standards (inhalation), PC properties

Risk

Measures

Activity- and company-specific information

Specific for the workplace

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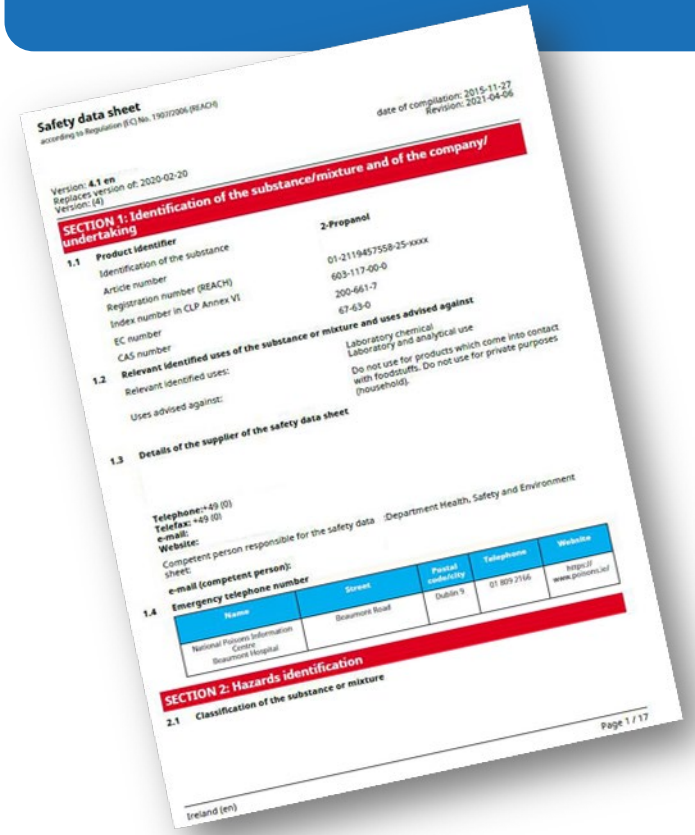
Information sources



Safety data sheet
according to Regulation (EC) No. 1907/2006 (REACH)

date of compilation: 2015-11-27
Revision: 2021-04-06

Version: 4.1 en
Replaces version of: 2020-02-20
Version: (4)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 **Product identifier** — 2-Propanol

Identification of the substance — 01-2119457558-25-xxxx
Article number — 603-117-00-0
Registration number (REACH) — 200-661-7
Index number in CLP Annex VI — 67-63-0
EC number
CAS number

1.2 **Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: Laboratory chemical
Laboratory and analytical use

Uses advised against: Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

1.3 **Details of the supplier of the safety data sheet**

Telephone:+49 (0)
Telefax: +49 (0)
e-mail:
Website:

Competent person responsible for the safety data sheet: :Department Health, Safety and Environment

e-mail (competent person):

1.4 **Emergency telephone number**

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Centre Beaumont Hospital	Beaumont Road	Dublin 9	01 809 2166	https:// www.poisons.ie/

SECTION 2: Hazards identification

2.1 **Classification of the substance or mixture**

Page 1 / 17

Ireland (en)

- **Safety data sheet incl. exposure scenarios**

- Information on packaging, instructions for use
- Technical Rules for Hazardous Substances (TRGS)
- Sector- or activity-specific assistance from the accident insurance institutions, federal states, associations

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Plausibility check SDS


Image: www.pixabay.com

Sample questions:

1. Are there sections missing?
2. Label elements on the label = Lable elements in the SDS?
3. Is the information in sections 7 and 8 complete?
4. Do the H-phrases match the information in section 14?
5. Are the specifications of different suppliers the same for an identical substance or mixture (e.g. C&L, OEL) ?

Role of exposure scenarios?

Image: www.pixabay.com

Images: K. Braesch

Image: www.pixabay.com

- **Most hazardous substances at workplaces are mixtures!**
- **For these and (also many substances) there is no eSDS with exposure scenarios!**

Exposure scenario

Chemical

Image: www.pixabay.com

DNEL - Inhalation
DNEL - Skin

Classification and
PC properties

Risk

Measures (generalized)

www.mbi-mh.de

Exposure level during the activity

© FOX

Exposure assessment

Hierachy of protective measures

S ubstitution

T echnical protective measures

O rganisational protective measures

P ersonal protective equiptment

Often a combination of protective measures e.g. technical measure and maintenance

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Adaptation necessary

Exposure scenario

Image: www.pixabay.com

Real workplace

https://www.baua.de/EN/Topics/Work-design/Hazardous-substances/Working-with-hazardous-substances/Bulk-materials.html?pos=1

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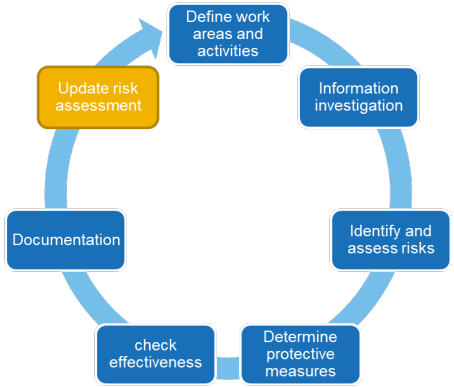
Updating the risk assessment

- **Introduction of new hazardous substances**
- **Change in activities or working conditions**
- **Results and findings from:**
  - checking the effectiveness of protective measures
  - Occupational health care
  - Accidents, illnesses, ...



Conclusion

- **For a risk assessment you need**
  - Information on the hazardous substance (SDS, sections 1-16)
  - Information on the activity (company-specific)
- **Exposure scenarios for substances can help, but cannot replace company-specific solutions!**
- **Update required!**

The many regulations can be a challenge, especially for SMEs!

Thank you!

EMKG - Workplace & Chemicals

Questions?

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