

Promising Risk Management Options for Biocides

Dr. Urs Schlüter

2006-04-04

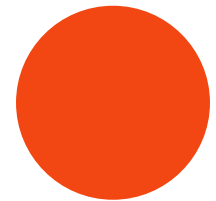
Three Categories of Measures

Level of Exposure



Reference Value

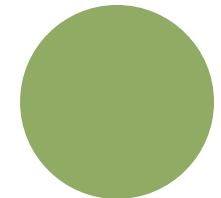
Actual Exposure > Reference Value →



but
Actual Exposure < Reference Value →
Potential Exposure > Reference Value →

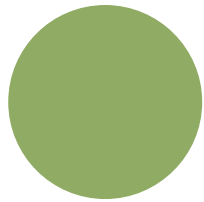


Potential Exposure < Reference Value →



2006-04-04

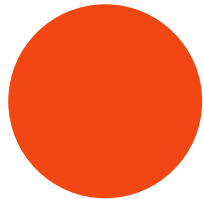
Risk targeted measures



→ basic rules of occupational hygiene



→ combination of safety measures individually adjusted for every single scenario



→ strict measures like conditions, non-authorisation, non-inclusion, bans

2006-04-04

Potential Exposure < Reference Value

**safe use at the work
place**

- Safe use under compliance with basic rules of occupational hygiene
- no further technical and organisational measures
- no PPE
- maybe called inherently safe biocidal product

2006-04-04

but **Actual Exposure** **<** **Reference Value**
Potential Exposure **>** **Reference Value**

**safe situation at the work
place under specific
conditions**

**application of the typical
OSH STOP-principle**

- Use under conditions described in the application for authorisation
- Conditions of use are part of the authorisation:
 - **S**ubstitution
 - **T**echnical measures
 - **O**rganisational measures
 - **P**PE

Influence of measures on actual exposure

S

Technical measures

O

P

Example: Fumigation of burrows

- Applicator instead of hand application
- Reduction of inhalation exposure by an order of magnitude

Example: Dental laboratories

- Local exhaustive ventilation reduces inhalation exposure by a factor of 10

2006-04-04

Influence of measures on actual exposure

S

T

Organisational measures

P

Example: Spray Application of Biocides

- good training of the operator instead of untrained use
- Reduction by an order of magnitude for dermal exposure
- achievable by code of good practice ?!

2006-04-04

Influence of measures on actual exposure

S
T
O

Personal Protective Equipment

Example: Wood preservatives - Dipping treatment

- for handling Dichlofluanid daily change of chemical protective gloves is necessary
- typical safety measures for wood preservatives are adjusted to mechanical hazards wood
- leather or fabric gloves instead of chemical protection gloves

2006-04-04

Actual Exposure > Reference Value

**use at the work place
not safe** →

Additional conditions for use
as part of the authorisation

If not possible:

No authorisation of product

**no safe use at the
work place** →

No entry in Annex I for this
product type

2006-04-04

Conclusions

- **Problems with application of STOP-principle**
- **Utilisation of the Instrument of Annex-I-inclusion or non-inclusion**
- **Harmonisation is necessary, especially for mutual recognition**
- **One possible Instrument can be European Codes of Good Practice**

2006-04-04

European Codes of Good Practice

- bundle of measures according to OSH-STOP-Principle
- harmonisation of safety measures for high risk activities and/or substances
- guidance for authorisation by competent authorities, e.g. effectivity of measures
- validation is essential for acceptance
- specification for users

2006-04-04

Dr. Urs Schlüter

Federal Institute for Occupational Safety and Health

Friedrich-Henkel-Weg 1-25

44149 Dortmund

Germany

Tel. +49 (0) 231/9071-2442

Fax +49 (0) 231/9071-2611

schlueter.urs@baua.bund.de

www.baua.de

2006-04-04