Results of Workshop II

Scientific basis of Control Banding and new developments

baua:

Starting point

Scientific basis CB tools could be based on:

1. Validity: sufficient discriminatory power and sufficiently – but not overly – conservative

2. Reliability: do users come to the intended results?

3. Transparency

- Benefits of a uniform scientific basis of CB Tools:
    - Trust amongst the user group ("risk governance")
    - Clear focus future developments

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Focus on reliability and validity of

1. Hazard banding with R-phrases and H-phrases

2. Exposure modelling

3. Fire and explosion risks

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Hazard banding

- COSHH hazard banding scheme developed 20 years ago
  - Based on statistical evaluation of UK OELs
  - Same scheme used for CLP hazard phrases
  - DNELs are becoming available
- Validation can be done by comparing hazard bands with threshold values (eg OELs or DNELs)
  - BAUA study (semi-) available
- OELs are not DNELs
  - Swedish study: OELs tend to be higher, because socio economic impact taken into account

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Hazard banding continued

- Problem: Currently lack of data on which the C&L of substances is based
  - How reliable are H-phrases? Preparations?
  - Garbage in = garbage out
  - More tox data from REACH dossiers
  - Information on ECHA website
- What does this mean for CB tool users?
  - Availability of information will be better
  - CB tool use might have difficulties interpreting
  - REACH info → practical information (session 1)
  - How to go from e-SDS exposure scenario to RA in the workplace?

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Hazard banding - recommendations

- Develop an idea how information from REACH can be used to upgrade the scientific basis of CB Tools

- More research needed on hazard banding in CB Tools
  - Take into account differences OELs/DNELs

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Exposure assessment

- The validity of the exposure predictions can be evaluated with measured data
- Substantial variance remains unexplained
- Use of upper limit in the exposure distribution important
- BAUA is putting tremendous effort in validation of Tier I models and Control Guidance Sheets
  - In general CB works surprisingly good
  - More validation activity needed
- Is the assessor the weakest link?
  - Especially when they have an interest

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Exposure assessment cont.

- Weak point = dustiness
  - Limited measurement methods available for quantification of dustiness
  - Often no information in e-SDS
  - Perhaps develop a list with examples for chemical powders <u>and</u> solid objects

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Exposure assessment cont. II

- Renewed focus needed on <u>dermal exposure</u>
  - Very little measured data
  - EMKG dermal not quantified
  - No validated measurement method available
- Possible solution is to focus on high exposure/high risk situations:
- Eg for liquids to focus on <u>low volatiles</u> with and without high air concentration

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Exposure – recommendations

- Focus needed on scientific basis dermal exposure

- Focus on quantification of dustiness of powders

- Strive for harmonisation
  - E-team could be a good starting point
  - Join forces to agree on scientific basis
  - Compare outcome of exposure models

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Fire and explosion risks

- New and interesting topic!
- Scientific basis: no clear view
- Compared to ind. Hygiene big safety factors
  - More control measures recommended than necessary?
  - Many parameters in the Risk Assessment
  - In practice: very limited information, especially on dusts

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Fire and explosion – Recommendations

- Review of scientific basis
  - Especially of guidance on the market
  - Explosive atmosphere will never have R- nor H-phrases
  - Look into maintenance operations (=highest risk)

baua:

Thank you!

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