



Bundesanstalt für Arbeitsschutz
und Arbeitsmedizin

REACH RESTRICTION on DIISOCYANATES

Dr. Andreas Lüdeke

Division 4 Hazardous Substances and Biological Agents

Topics

- **Motivation**
- **The restriction proposal and exemptions**
- **The training measure**
- **Enforcement**
- **Incentives for Substitution**
- **Key messages**
- **State of play**

Isocyanates are chemicals with specific problems

- **5.000** cases of Occupational Asthma (OA) caused by Diisocyanates per year (unacceptable high risk)
- OSH regulations and additional measures in some MS in place → Since 2005 only minimal decrease of OA.
- Setting OEL unlikely to contribute significantly to reducing respiratory sensitisation



Specific initiative for restriction with the goals:

- Reduction of occupational asthma
- Taking seriously producers' responsibility under REACH
- Realise **REACH-OSH Synergies**

The restriction proposal

1. Shall not be used ... unless
 - Cumulative NCO-concentration < 0.1% by weight
 - Product classified as “Product of simple requirements” (“Very low exposure” expected)
 - **Trainings and Technical Measures** applied
2. Shall not be placed on the market ... unless
 - Product classified as “**Product of simple requirements**”
 - Supplier ensures that the recipient of the substance or mixture is provided with Training Material
3. Manufacturers/ Importers develop **Training Material**

The training measure – A Tiered Approach

1. Products of special requirements

- High exposure (e.g. handling of warm or hot formulations, spraying in open air)
- Intensive training & technical measures

2. Products of general requirements

- Moderate exposure (e.g. spraying in ventilated hoods, application by roller, brush, dipping, pouring)
- Basic training

3. Products of simple requirements

- Negligible exposure if used according to instructions
- No specific training in addition to CAD (98/24/EC)
- E.g. construction foam cartridges

Products of simple requirements

- **Manufacturer responsible for assignment to groups**
 - Self-evaluation based on clear rules
 - Documentation of measurements & assessment
 - Criteria to be defined in Guideline
- **Key criteria for assessment**
 - Total air concentration of all isocyanates < 1 ppb
 - No aerosol forming. No heating above 45°C
 - “Very low risk of dermal exposure” due to product design and resulting application procedure
 - *“Very low exposure” does not mean “Safe”*

Effectiveness of training measure

- **Several studies on OSH training programs confirm positive behavioural change with effectiveness in the range between 10 - 80%** (lower accident rate/ lower rate of occupational diseases)
- **Most comparable study identified:** Motor Vehicle Refinish study
 - National awareness training project for spray painters using diisocyanates (UK HSE)
 - “Safety and Health Awareness Days” (duration: half a day)
 - Over 6 year period incidence rate of occupational asthma in vehicle spray painters reduced: **50 % - 70 %**.

The training measure – The role of Industry

- **Suppliers' responsibility for training material**
 - Suppliers (manufacturers, distributors, importers) collect training materials from different industry sectors
 - Training material will be developed by a „trainings working group“ (non-profit body); including examinations & Background material for trainers etc.
 - Consortium of suppliers is responsible for the dissemination infrastructure (website)
 - Material provided in 24 EU official languages
 - Distributed together with Safety Data Sheets
 - Establish infrastructure for quality assurance (Secretariat and Advisory board)

The training measure – Quality assurance

– The advisory board

- accompanies the development of training materials and keeps it up-to-date
- Takes care about practicality and effectiveness of the trainings
- Members: e.g. experts from national labour inspectorates, industry, national enforcement authorities (including the Forum), compensation boards, European trade unions conference, retailers
- MS are free to join.

How will the training be organized?

- Training can be implemented into the available structures of regular OSH trainings
 - REACH-OSH Synergy
- Training with the training material can be done by
 - the employer himself
 - Supervisors
 - Internal OSH specialists
 - External training institutes.

Summary: The training measure

- **Commitment of the industry to supply diisocyanates only to recipients that sign up to comply with the requirements of the restriction.**
- **Responsibility of Industry to provide training material**
- **MS are free to require/ acquire additional training going beyond the training material provided**



The REACH-Restriction takes seriously producers' responsibility under REACH

Enforcement of the Restriction

- **Manufacturer (Provider of product)**
 - Checking documentation about commitment for training of recipient of product
 - Checking correct assignment of products by examination of Manufacturer's documentation (according to the guideline)
- **Employer (Recipient of product)**
 - Checking Employer's documentation of workers' training & successful completion of training proof (suitability of training material, signature of workers)



**Monitoring easily possible for REACH and/or
OSH bodies → Synergies**

Enforcement of the Restriction

- **Part of routine enforcement by REACH or OSH-Authorities → Synergy**
 - No formal certification system for employers needed (recipients of isocyanates). Sign-up to compliance is sufficient, because the conditions of the requirement are easily enforceable (detailed and substantiated requirements)
 - No formal certification of employees; Proof of successful training is sufficient (Unified training material and proof provided by industry).



The restriction will not entail additional bureaucratic burden

Substitution of particularly hazardous diisocyanates

- **Chemical substitution of diisocyanates at present not technically feasible**
- **But: the restriction generates INCENTIVES for development of Products with**
 - Cumulative NCO-concentration < 0.1 % by weight
 - “Products of simple requirements” by product design and application procedures



- 1) „Higher” risk products will be removed from the market.**
- 2) Safe packaging and application methods will be developed.**

Main messages

- **The REACH Restriction on Diisocyanates**
 - takes seriously producers responsibility under REACH.
 - supports employers to comply with REACH and OSH-obligations → **Synergy**
 - is enforceable by REACH and OSH authorities → **Synergy**
 - Producers (REACH) and users (OSH) will prefer to put on the market and to apply „low-risk products“ → **Synergy**



This REACH restriction will make OSH provisions more substantiated, harmonised, binding and enforceable.

State of play

- **RAC and SEAC concluded in 2017 about Restriction**
 - RAC considered the risk to the workers is not adequately controlled, and needs to be addressed; the training is considered an effective measure.
 - SEAC considered the restriction proportionate.
- **9/2018 start of discussion in REACH committee**
- **Comments from AT, BE, ES, IE, LT, NL, UK**
- **KOM draft proposal for REACH Annex VII entry as regards Diisocyanates**
- **REACH committee will conclude on restriction in 9/2019 (planned)**

Thanks a lot for your attention

Dr. Andreas Lüdeke

Federal Institute for Occupational Safety and Health

Friedrich-Henkel-Weg 1-25

44149 Dortmund, Germany

Tel. +49 (0) 231/9071 - 2106

Luedeke.andreas@buaa.bund.de

www.buaa.de

