



Risk management of hazardous substances in products for indoor use

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Content of this presentation

- National goals - chemicals
- Relevant product categories
- Regulations
- Some examples
- Information/contact with sectors/voluntary actions

National goals - chemicals

- Releases and use of substances that pose a serious threat to health or the environment shall be continuously reduced with a view to eliminating them by 2020.
- The risk that releases and use of chemicals shall cause injury to health or environmental damage will be minimised.
 - Norwegian priority list of hazardous substances

<http://www.environment.no/Topics/Hazardous-chemicals/Hazardous-chemical-lists/List-of-Priority-Substances/>



Relevant product categories

Examples of relevant articles/mixtures:

- Building and construction materials
- Flooring, wallpaper, tapestry
- Tablecloths, curtains, fabrics
- Furniture
- Paint, laquers and coatings
- Sealants, adhesives
- Cleaning agents
- Electric household appliances and tools
- IT and telecommunications equipment
- Lighting equipment
- Insulation on wires and cables



Relevant acts and regulations managed by Norwegian Environment Agency

- The Product Control Act
 - The purpose is to prevent products or consumer services from causing damage to health or the environment
 - **Section 3a. Requirement to apply the substitution principle** (users of hazardous substances should replace these with alternatives that entail less risk)
- Product regulations



Relevant acts and regulations managed by Norwegian Environment Agency cont.

- EU-Regulations implemented in Norway
 - CLP (Classification, Labelling and Packaging)
 - REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals)
 - RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment EEE)
- POPs listed in the Stockholm Convention (implemented in the Product Regulations)

Relevant regulations - CLP



- Classification Labelling and Packaging of substances and mixtures (EU Regulation 1272/2008/EC)
- Implications for further regulations

<http://www.miljodirektoratet.no/no/Tema/For-naringsliv/Klassifisering-og-merking-av-kjemikalier-CLP/>



Relevant regulations - REACH

Registration

- Industry shall register their substances to the European Chemicals agency (ECHA)

Evaluation

- The authorities evaluate the registrations

Authorisation and Restriction

- Hazardous substances on 3 lists in REACH:
 - Candidate list (SVHC-substances) - duty to inform
 - Annex XIV - substances that require authorisation before use
 - Annex XVII - restrictions

of Chemicals

- Information in supply chain- provide safety data sheet- exposure scenarios to describe safe use

Examples - PFOA

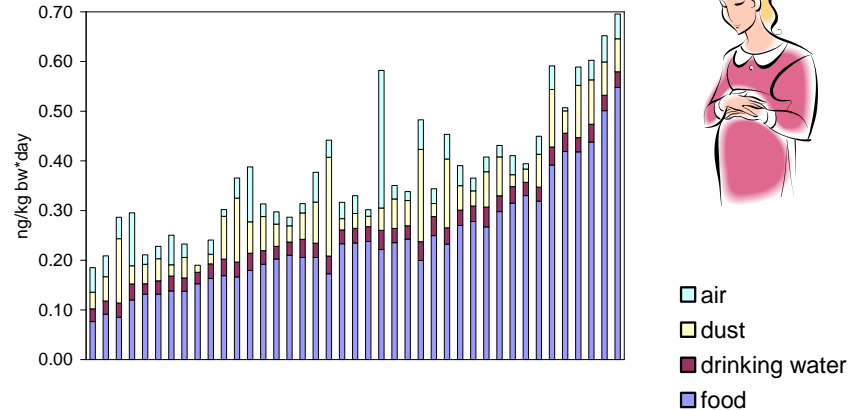
- Ubiquitous exposure of humans & environment
- Human exposure through food, drinking water and indoor air/dust



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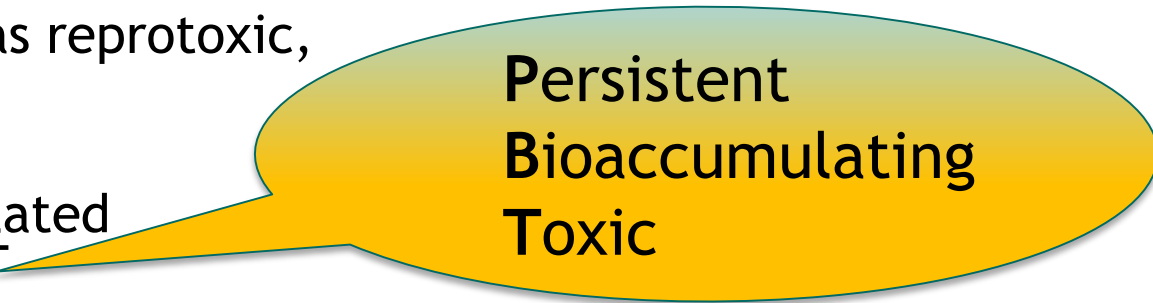
Examples - PFOA

- Study on the relative PFOA exposure from different sources (Line. S Haug et al, 2011)
 - Food major source (67 - 84 %)
 - In some scenarios indoor environment accounted for up to 50%
 - Figure presents individual intake, one scenario



Examples – PFOA cont.

- National ban on PFOA in consumer products (from 1. juni 2014)
- PFOA is classified as reprotoxic, carcinogenic a.o.
- PFOA and PFOA-related substances are PBT
- PFOA is included on REACH Candidate list (due to reprotoxicity and PBT)



**Persistent
Bioaccumulating
Toxic**

Examples – PFOA cont.

Proposal for a restriction on PFOA and PFOA-related substances in REACH (DE/NO cooperation)

Justification:

- PFOA and PFOA-related substances are PBT - exposure needs to be reduced as much as possible (no safe levels)
- Concerns for adverse health effects

Public consultation - comments by 17.06.2015!



<http://echa.europa.eu/restrictions-under-consideration/-/substance-rev/1908/term>

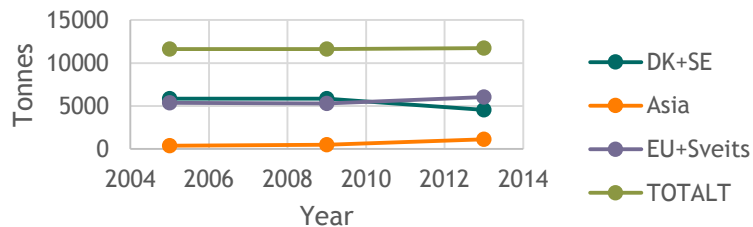
Examples – Phthalates (DEHP, BBP, DBP, DIBP)

- Main use as a plasticiser in PVC (in concentrations up to 30%)
- Minor uses in adhesives, sealants, paint and laquers
- Not chemically bound to the matrix and can migrate from the polymeric material
- Human exposure from indoor air/dust (also from articles by direct contact with skin or mucous membrane)

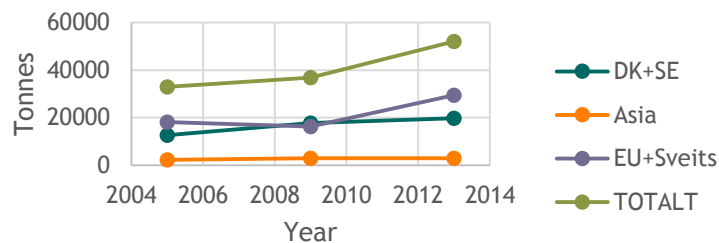
Examples – Phthalates (DEHP, BBP, DBP, DIBP) cont.

Product	Phthalate	Tonnes 2009	Tonnes 2013	Estimation metode
Flooring-, wall- and roofing-materials	BBP	14-23	20-34	Statistics SSB
	DEHP	93-154	136-227	
Cables	DEHP	268-402	777-1166	Statistics SSB

Import of flooring-, wall- and roofing-materials to Norway



Import of cables to Norway



Examples – Phthalates (DEHP, BBP, DBP, DIBP) cont.

- Included on the REACH Candidate List due to classification as reprotoxic (Repr 1B)
- Proposal for a ban (DK) in REACH on articles intended for use indoors and articles that may come into direct contact with the skin or mucous membranes.
- Proposal not supported by the ECHA Committees, Opinion available at http://echa.europa.eu/previous-consultations-on-restriction-proposals?search_criteria_name=BBP%7Cbenzyl%20butyl%20phthalate&search_criteria_ecnumber=201-622-7&search_criteria=BBP%7Cbenzyl%20butyl%20phthalate
- Restricted according to RoHS (maximum concentration value in EEE 0.1 weight % per homogeneous material) applies from 22 July 2019

Examples – Phthalates (DEHP, BBP, DBP, DIBP) cont.

- Included (DEHP, BBP, DBP) on the REACH Annex XIV (substances that require authorisation before use)
- Sunset date 21.02.2015, several applications for use a.o. in PVC (lenke til RAC opinions)
- ECHA and DK to prepare a restriction proposal
- Call for evidence to identify current uses in articles, phthalate content and phthalates migration rates, deadline 24.06.2015:
<http://echa.europa.eu/addressing-chemicals-of-concern/restriction/calls-for-comments-and-evidence>

Examples -

- More examples:
 - **DecaBDE** (national ban, ban in RoHS, REACH Candidate List, proposal for a restriction under REACH, proposed as POP under Stockholm Convention)
 - **HBCDD** (listed as POP under Stockholm Convention, REACH Candidate list and Annex XIV)
 - **Formaldehyde** (currently under Substance Evaluation; requirement for measurements in indoor environment)

Monitoring/survey projects (examples)

- Survey on use/occurrence of per- and polyfluorinated substances on the Nordic market (2013)
<http://norden.divaportal.org/smash/record.jsf?pid=diva2%3A701876&dswid=-9010>
- Project on the use and the incidence of per-and polyfluorinated substances in some every-day consumer products, focus C4-C6 (2015)
<http://dx.doi.org/10.6027/NA2015-911>
- Two monitoring projects planned for 2015;
 - PFAS in indoor dust
 - Content of phthalates in flooring-, wall- and roofing-materials and cables

Information about hazardous substances

- Information about hazardous substances (web pages managed by the Norwegian Environment Agency)

<http://www.environment.no/Topics/Hazardous-chemicals/>

<http://www.miljostatus.no/Tema/Kjemikalier/Produkter/Produkter-til-bygg-og-anlegg/>

<http://www.miljostatus.no/Tema/Kjemikalier/Produkter/EE-produkter/>

<http://www.erdetfarlig.no/>

<http://www.erdetfarlig.no/no/produkter/oppussing/>

<http://www.erdetfarlig.no/no/produkter/elektronikk/>

Contact with sectors/organisations

- Contact with relevant sectors/industry organisations concerning hazardous substances of concern in building materials/indoor products
- Industry organisation voluntary action and agreements

<http://byggmesteren.as/2013/03/04/jubel-for-miljovalg-i-bygg/>

<http://www.dibk.no/globalassets/miljo/frivillig-avtale-om-utfasing-av-mellomkjedete-klorparafiner-i-fugeskum.pdf>

<http://privat.tarkett.dk/content/tarkett-fjerner-ftalater-fra-vinylgulve>



www.miljodirektoratet.no