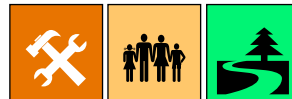


Aktuelle Ansätze der Umwelt-Exposition bei der Stoffsicherheitsbeurteilung

Anforderungen nach REACH

Ziel von REACH: Schutz von Mensch und Umwelt

basierend auf einer Risikobewertung
für Arbeitsplatz, Konsumenten und Umwelt



Um Mensch und Umwelt zu schützen muss

- Das Risiko einer Chemikalie im CSR beurteilt werden (Exposition / Gefahr)
- Eine Anleitung zur sicheren Verwendung der Chemikalie via eSDB gegeben werden



Umweltrisikobewertung



Um das Umweltrisiko für sehr viele Chemikalien (> 100.000 vorregistriert) bewerten zu können, brauchen wir Standards (Standardtools, Standardsprache, ...)

Deskriptoren: EUCs / ERCs

Problem: Release Faktoren: ERCs – extrem konservativ

=> Verfeinerung unbedingt nötig (A&B Tabellen -> ungenau, OECD ESDs -> teilweise sehr ausführlich)

Die Lösung: SPERCs ((sector)specific ERCs)

ECHA

Guidance on information requirements and chemical safety assessment
Chapter R.16: Environmental Exposure Estimation



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Werkzeuge zur Beurteilung des Umweltrisikos



Standard Tool: EUSES – das empfohlene Tool in der ECHA guidance

ECETOC TRA v 2.0 – Verfügbar ab 15. Mai 2009 (= EUSES Excel Version plus ERCs & SPERCs)

ECHA CSR Tool (wird ECETOC TRA Konsument, Arbeitsplatz und EUSES+ECETOC ERCs+SPERCs enthalten)

ECETOC TARGETED RISK ASSESSMENT MODEL

Identification of substance, use and assessment
Input of physical/chemical parameters:
Set-up assessments (select one or more):
a Human Health - Workers
b Human Health - Consumers
c Environmental
Safe assessment set-up to database or load from database

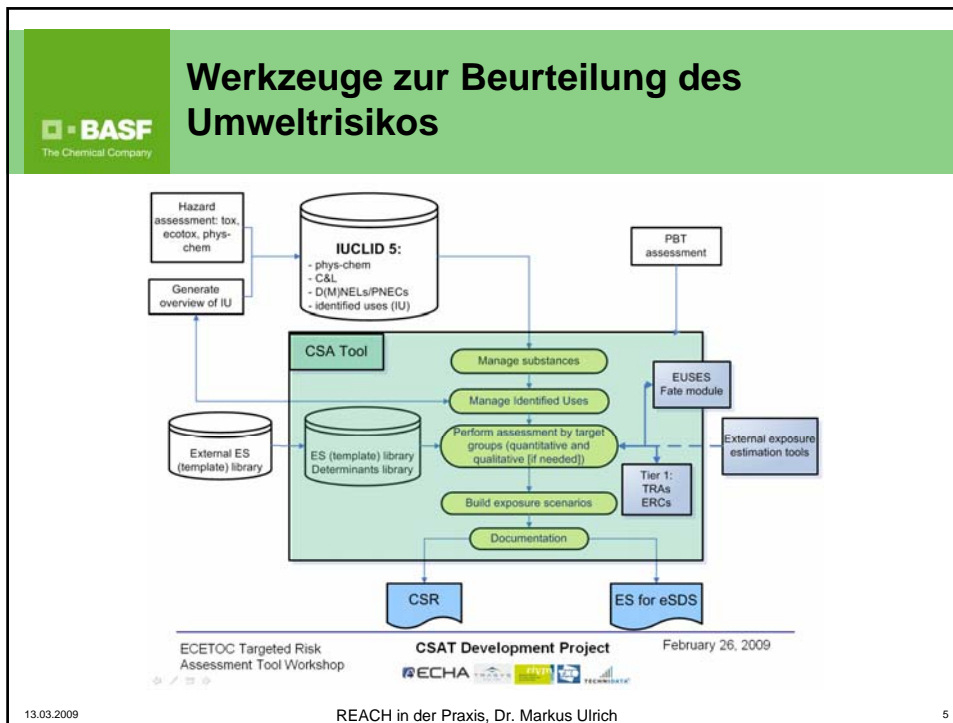
Step 1 - Identification
Step 2 - PC data
Step 2a - worker assessment
Step 2b - consumer assessment
Step 2c - environmental assessment



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Kommunikation der sicheren Verwendung via eSDB

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ES Format (Stand 02/2009) aus ECHA CSR-Tool Consultation Group

1. Title (Example 1)		2.2 Control of environmental exposure				
Free short title	Industrial automated spraying of paints	Frequency and duration of use		Pattern of release to the environment		
Systematic title based on use descriptor	PC9, PROC 7, SU17, ERC4	Amounts used		Continuous		
Processes, tasks, activities covered	Automated spraying of paints without manual transfer	Environmental factors not affected by risk management measures		Amount used		
2. Operational conditions and risk management measures		Receiving surface water flow rate		< 2 l/d		
		STP needed/assumed		Yes		
Spraying in industrial setting and applications. The substance does not end up in the finished product and is not fully consumed. Therefore internal recovery or environmental risk control measures are likely to be required.		Size of STP		Degradation Efficacy: > ... %		
		STP needed/assumed		Yes		
2.1 Control of workers exposure		Size of STP		> 2 000 m ³ /d		
		Frequency and duration of use		3. Risk characterization ratios and exposure estimation		
Duration of exposure	> 4 h/d	Workers Exposure	Exposure	DNEL	RCR per route	RCR combined
Frequency of exposure over the year	< 240 d	Long-term inhalation	338 mg/m ³	100 mg/m ³	g,4 ^[1]	
Product characteristics		Acute inhalation				
Physical state of the product	Liquid	Long-term dermal exposure systemic	42.86 mg/kg bw/d	143 mg/kg bw/d	0.3	
Concentration of substance in product	< 100%	Environment exposure	Exposure	PNEC	RCR	
Vapour pressure of substance	< 10 kPa	Predicted environmental concentration aquatic	8 mg/l	125 mg/l	0.06	
Human factors not affected by risk management measures						
Exposed body parts dermal	Hands and two forearms					
Other given operational conditions affecting exposure or workers						
Inside/outside	Inside					

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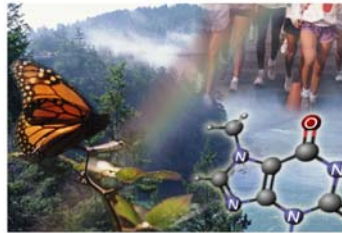
Kommunikation der sicheren Verwendung via eSDB

Was soll kommuniziert werden?

- Verwendungsdeskriptoren
- Die der sicheren Verwendung zugrundeliegenden Bedingungen
- PEC, PNEC, RCR
- Sicher zu verwendende Menge M_{safe} ?
- Was sind sinnvolle Informationen für nachgeschaltete Anwender?

RECHA

Guidance on information requirements and chemical safety assessment
Chapter R.12: Use descriptor system



May 2008
(version 1.2)

Guidance for the implementation of REACH

ECETOC TRA Customer Scaling Tool für die Umwelt

Anpassung an spezifische Gegebenheiten wie Abflussrate, Kläranlagenkapazität:

Scaling durch DU

z.B. via ECETOC Customer Scaling Tool

Relevante Parameter beeinflussen Umweltexposition linear

➔ Einfaches Scaling möglich

Excel Tool kann von jedem DU verwendet werden

SECTION 2 Customer specific information			
For some information default values are given and will be used if no better customer data are available.			
2.1 RELEASE INFO			
Max. amount of product used (kg/d)	Customer data	Max. amount of product used (kg/d)	Max. amount of product used (kg/d)
Released to sewage	Customer data	Released to sewage	Released to sewage
Released to surface water	Customer data	Released to surface water	Released to surface water
Type of Release	Customer data	Type of Release	Type of Release
Type of Discharge	Customer data	Type of Discharge	Type of Discharge
2.2 STP / DILUTION INFO			
STP dilution factor (in %)	Customer data	STP dilution factor (in %)	STP dilution factor (in %)
STP loading to soil (l)	Customer data	STP loading to soil (l)	STP loading to soil (l)
Dilution factor in STP	Customer data	Dilution factor in STP	Dilution factor in STP
Release flow from STP (m ³ /d)	Customer data	Release flow from STP (m ³ /d)	Release flow from STP (m ³ /d)
SECTION 3 Evaluation of safe use for sewage emissions			
INPUT GIVEN			
Type of Release		Type of Release	
Type of Discharge		Type of Discharge	
STP loading to soil		STP loading to soil	
CALCULATED DAILY USE			
M _{safe} , customer (kg/d)		Safe use is limited by	
	15.0	Risk for STP (intermittent emissions)	
COMPLIANCE CHECK SEWAGE EMISSIONS			
COMPLIANCE STATEMENT & RECOMMENDATION FOR SEWAGE EMISSIONS			
Max. amount used by Customer (kg/d)	600		
M _{safe} , customer location (kg/d)	35.6		
Safe use (M _{safe} - M _{customer})	564.4		
Do the amount of product used at the customer site(s) exceed the amount (M _{safe}) (see the table) used (M _{customer}) based on results for sewage discharges?			

Specific vs. generic



Spezifische Expositionsszenarien

Hohe Anzahl an Stoffen, Verwendungen und Standorten mit jeweils spezifischen Gegebenheiten

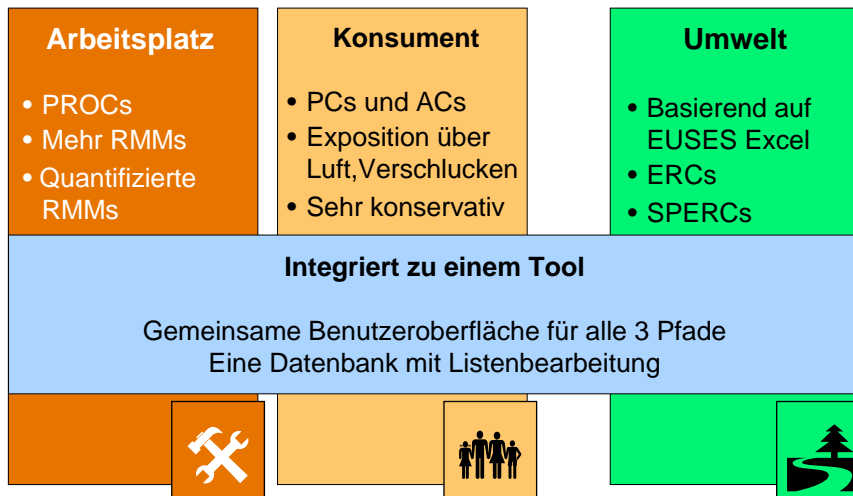
➔ Standortsspezifische individuelle eSDBs nicht möglich

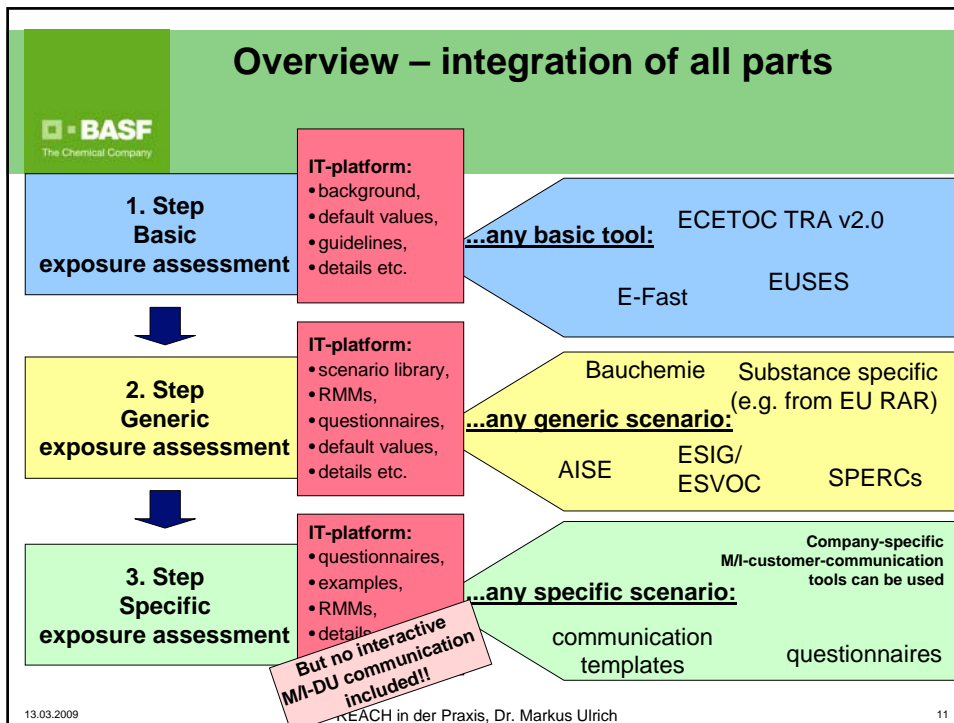
Generische Expositionsszenarien

- Unerlässlich für REACH
- Effizientester Weg der Kommunikation in der Lieferkette
- GES für die Umwelt: SPERCs

➔ Branchenverbände müssen SPERCs entwickeln

ECEO TRA als integriertes Tool





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Ein großer Schritt ist getan

Vielen Dank für Ihre Aufmerksamkeit

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