Stoffenmanager®

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Connecting work place risk assessment (under OSH) with REACH exposure scenarios:

An SME case study

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Helsinki

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The employer is required to assess and manage the risks to workers health and safety

1) Identify the chemicals present in the workplace:

- All chemicals: supplied chemicals, intermediates, by-products, etc.

2) Assess the risks arising from the identified chemicals

- Occupational exposure limit values can play a key role.
- Mixed exposures (most common situation) and not only exposure to a single substance must be considered.
- SDS + Exposure Scenario important source of information.

3) Implement risk management measures

- Eliminate exposure (e.g. substitution)
- Control exposure (use only in closed systems, local exhaust ventilation, personal protective equipment…)
- General principles for risk management (training and information of workers, health surveillance, …)

Case study: solvent recycling & solvent production: substances & mixtures

SME

- Appr. 35 employees

Personal Air Sampling

- Since 1993: solvents
- Chemicals management not high on agenda
- No periodic measurements according to CEN EN:689
- Since 2013: on agenda again (visit Labour Inspection)

Biological monitoring

- Not indicated

Quantitative estimation

- Since 2013: other substances > Stoffenmanager®
- Not complete yet

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Risk assessment inhalation - quantitative

+ Name
+ Product
+ Process
+ Workplace
+ Risk assessment

Below you will find the 'worst case' concentration estimates. Given a certain product that is being used during work, the concentration in the air can vary considerably. The 'worst case' concentration indicates the estimated concentration during unfavorable conditions (for 10 % of the situations the concentration will be higher than the 'worst case' concentration, for 90% of the situations lower).

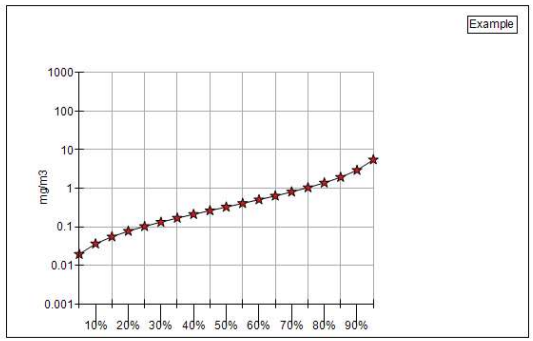
Component	Limit value (mg/m³)	Task concentration (mg/m³)	RCR Task	Daily concentration (mg/m³)	RCR Day
Example	115 DNEL SE LTE	2,94	2,94 / 115 = 0,03	0,09	< 0,01

Two exposure concentration are estimated. First the task concentration is presented. The second concentration is the daily average concentration. This value is calculated by adjusting the task concentration for the entered duration of the task. If the duration of the task is 8 hours, then the daily average concentration equals the task concentration.

SAVE | SAVE AS NEW VERSION | ARCHIVE | CANCEL

Risk Characterization Ratio – **task / day** concentration / limit value
≥ 1 exceeds limit value **during the task / day**
<1 task concentration below limit value

Example	mg/m3
50 percentile	: 0.33
75 percentile	: 1.04
90 percentile	: 2.94
95 percentile	: 5.51



CLOSE

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Veilig werken met gevaarlijke stoffen

Case study

And REACH?

- Hardly an issue……..downstream supply chain:
  - Company finds ES (PROCS) language difficult to understand & to translate into OHS language
  - Substances: company filters out relevant ES from e-SDS & forwards these to customers
  - Mixtures: company finds it complicated how to generate and communicate ES of mixture, until now only distributing SDS, not e-SDS
    - MSDS IT provider: ENES tools not yet (fully) implemented – not mandatory and waiting for consensus / final formats
  - "We know what to do, but not how to do it"

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Case study

And REACH?

- Hardly an issue……at the plant itself:
  - No DU compliance check yet
  - They rely more on their own risk assessments
  - Although…… not complete yet

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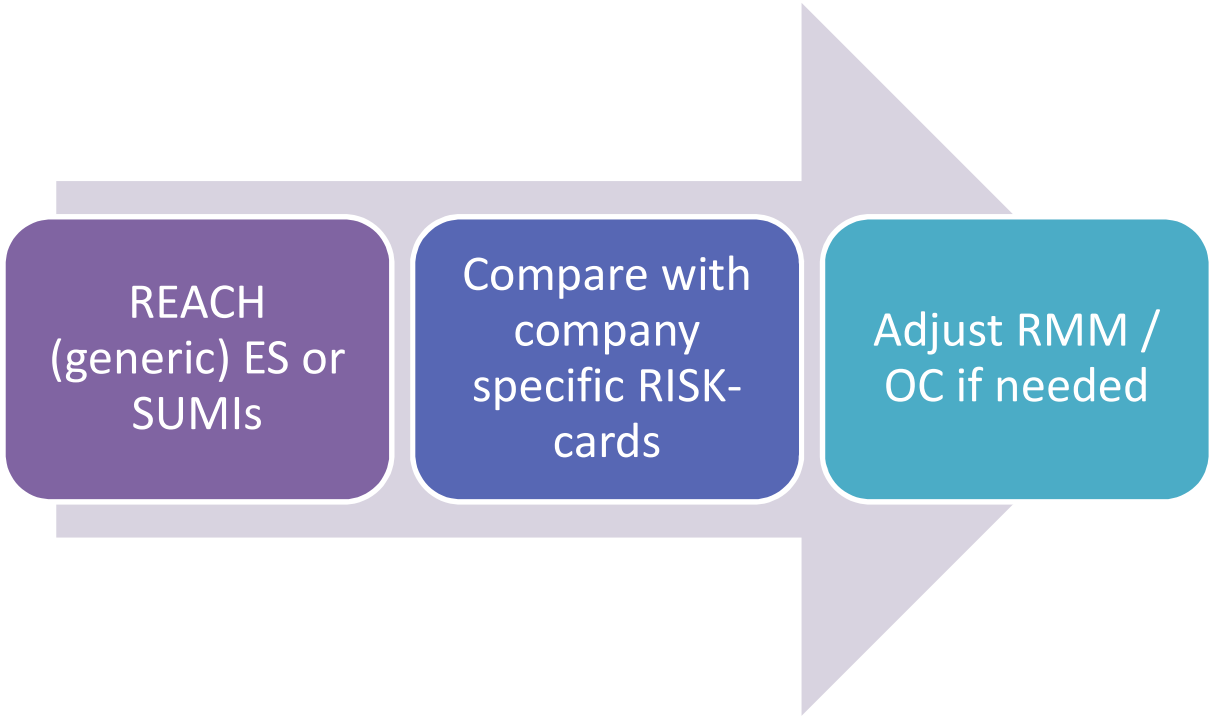
Will this help such a company?

Supply chain communication

- SDB transfer (e-standard, XML)
- top down & bottom up
- in addition: communicate SUMIs and Workplace Instruction Cards (WICs)
- exposure assessment tool independent:
  - safe use = safe use

Question: how to communicate SUMIs and WICs as XML & in multiple languages?

Will this help such a company?
DU compliance check on SUMI / WIC level



Alternatively: notify own OSH risk assessment (in form of DU CSR) to ECHA

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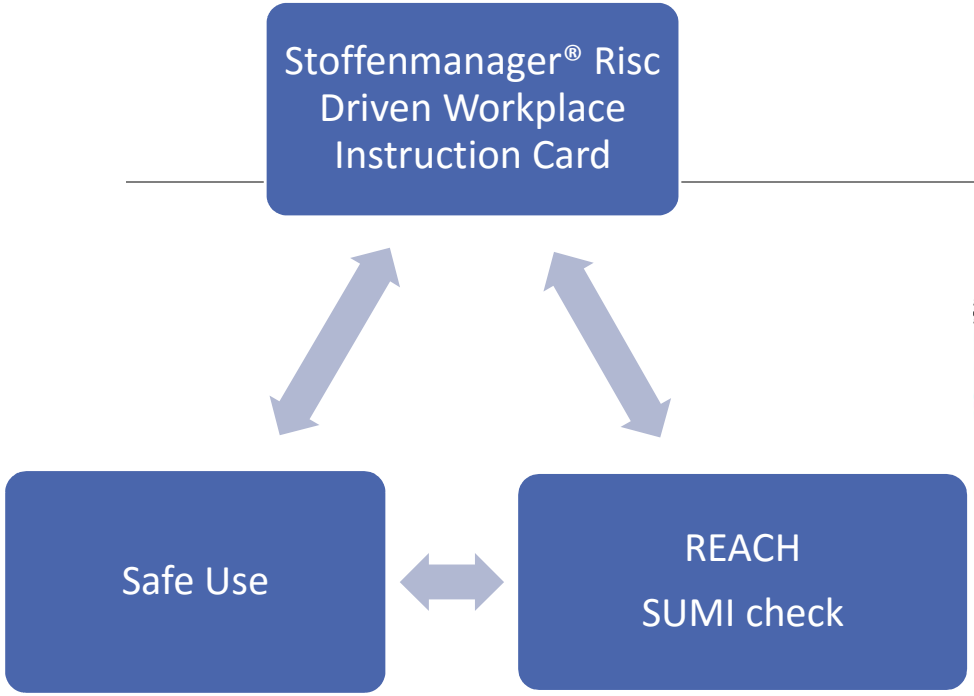

- Local language!
- WIC for workers (no PROCs - ready) & HSE (with PROCs – to be developed)
- Mapping PROCs to OSH activities is complicated (not 1:1)!!

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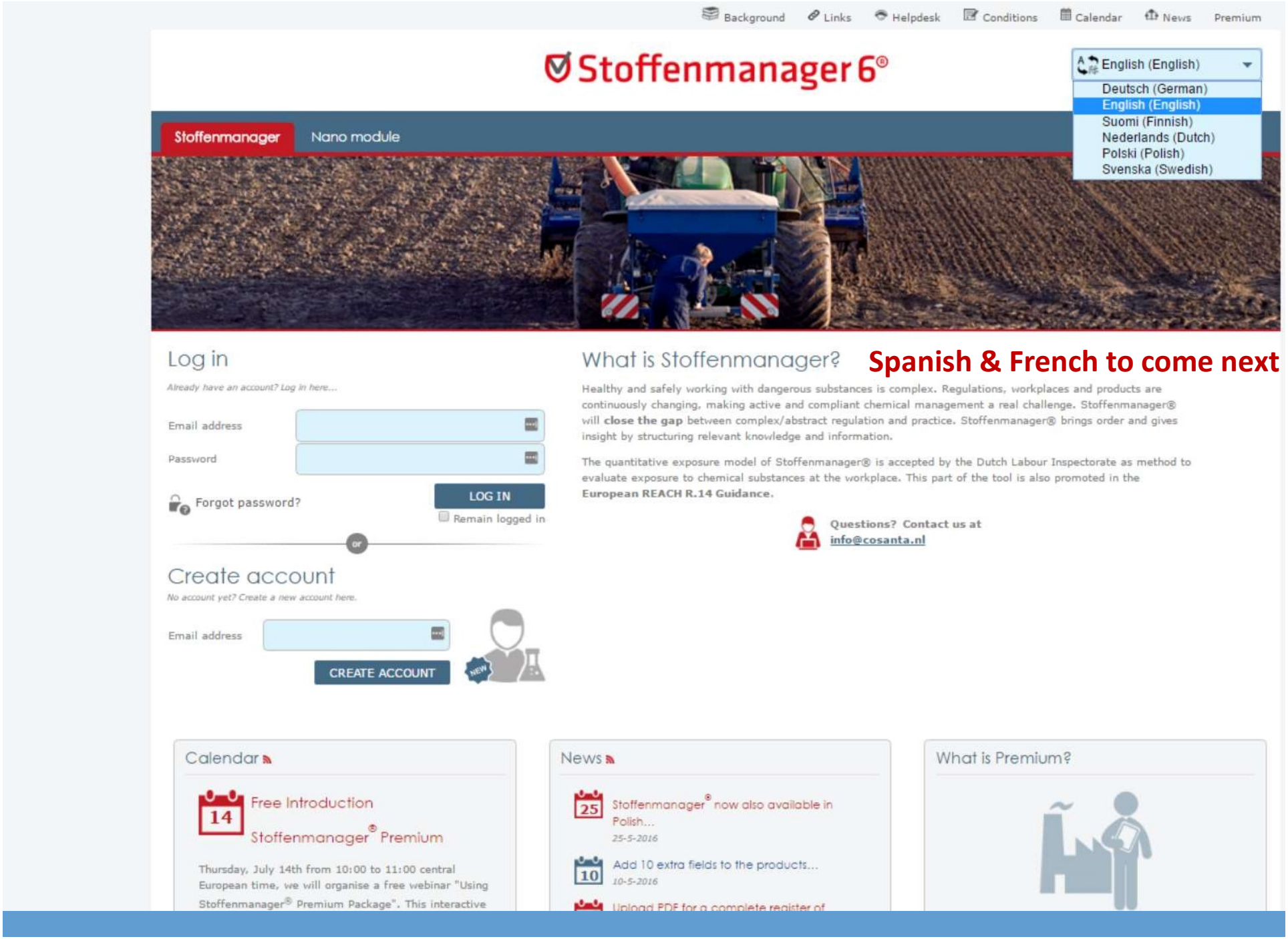
Workplace instruction card:	Extraction of oil contaminants
Product:	n-Hexane
Location / department	Cosanta
Process	Extraction of oil contaminants in fume cupboard
Workplace	Extraction Lab
⚠ Danger properties	
Signal term: Danger 	H225: Highly flammable liquid and vapour H304: May be fatal if swallowed and enters airways H315: Causes skin irritation H336: May cause drowsiness or dizziness H361f: Suspected of damaging fertility. H373: May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) H411: Toxic to aquatic life with long lasting effects
Personal protection	
 Safety spectacles	 Nitrile rubber  Working clothes
Follow the work instruction	
Control measures	Use containment of the source with local exhaust ventilation (for example a fume cupboard)
Protection worker	-
Room ventilation	General ventilation (mechanical)
Respiratory protection	-
Dilution with water	100% product, 0% water
General	Clean the working room daily. Report malfunctions or defects to your supervisor.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Password
Forgot password?
LOG IN
Remain logged in
or
Create account
No account yet? Create a new account here.
Email address
CREATE ACCOUNT
NEW
What is Stoffenmanager?
Spanish & French to come next
Healthy and safely working with dangerous substances is complex. Regulations, workplaces and products are continuously changing, making active and compliant chemical management a real challenge. Stoffenmanager® will close the gap between complex/abstract regulation and practice. Stoffenmanager® brings order and gives insight by structuring relevant knowledge and information.
The quantitative exposure model of Stoffenmanager® is accepted by the Dutch Labour Inspectorate as method to evaluate exposure to chemical substances at the workplace. This part of the tool is also promoted in the European REACH R.14 Guidance.
Questions? Contact us at
info@cosanta.nl
Calendar
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Free Introduction
Stoffenmanager® Premium
Thursday, July 14th from 10:00 to 11:00 central European time, we will organise a free webinar "Using Stoffenmanager® Premium Package". This interactive
News
25
Stoffenmanager® now also available in Polish...
25-5-2016
10
Add 10 extra fields to the products...
10-5-2016
Upload PDF for a complete register of
What is Premium?

Will this help such a company?

Alternatively

- DU report to ECHA
  - exception?
  - What if company invested resources in showing compliance under CAD?
  - Should this info not be used too?
  - DU report more simple?
  - REACH or OSH language
  - Tool independent: safe use = safe use
  - XML import in ECHA webform

Thank you!