

**Veiligheidsinformatie van producten conform REACH**

**Hoe maak je een  
*extended Safety Data Sheet*  
voor een product**

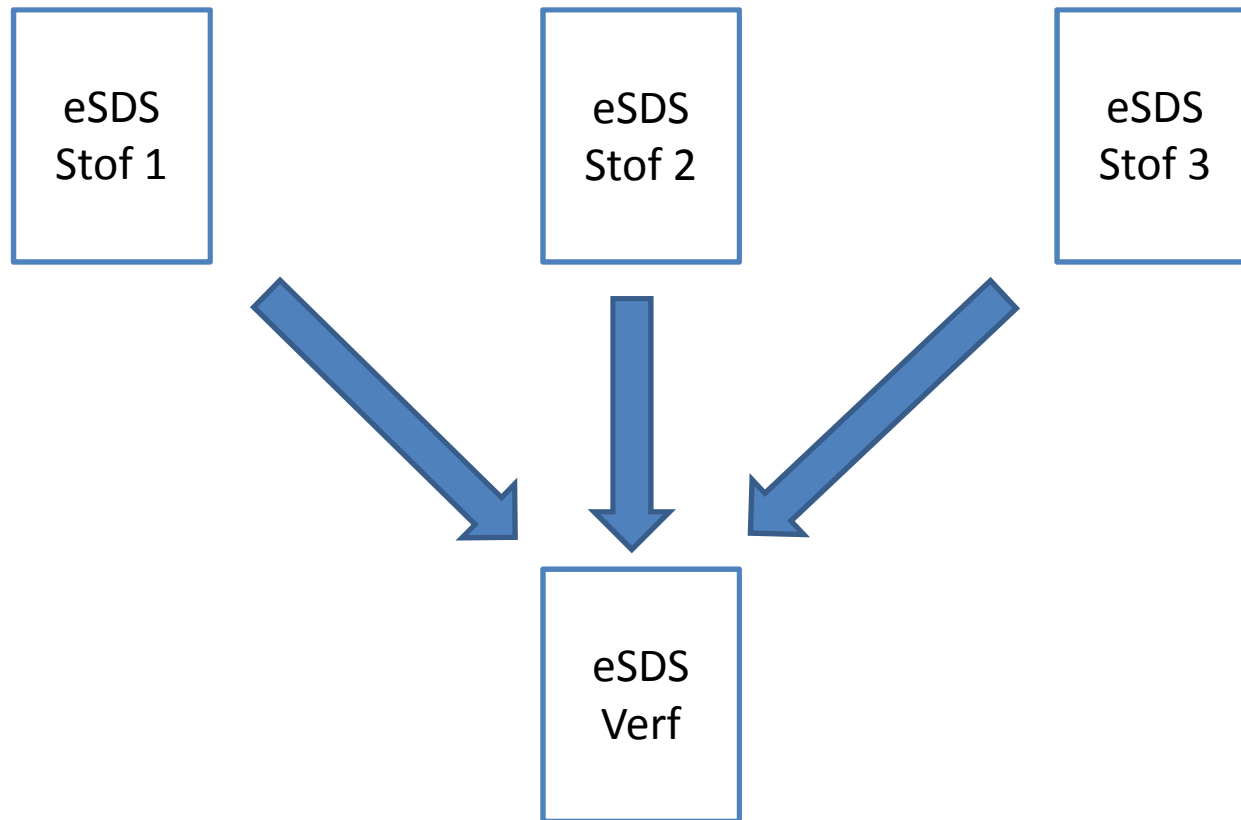
Henk Thuis

[www.caesar-consult.nl](http://www.caesar-consult.nl)

Landelijke Stoffendag 2010

**caesar consult**  
RISICOBEOORDELING VAN CHEMISCHE STOFFEN  
CHEMICAL SUBSTANCES RISK ASSESSMENT

# Onderwerp





[Home](#) › [Over ons](#) › Waar zijn we goed in

## Waar zijn we goed in

- vaststellen van de omvang van de gezondheidsrisico's op de werkvloer (scaling)
- verbeteren van productieprocessen (emissie- blootstellingsreductie)
- vaststellen van de effectiviteit van beheersmaatregelen (interventieonderzoek)
- afleiden van bedrijfsgrenswaarden
- optimaliseren van monitoringprogramma's (bewaking van blootstelling)
- beoordeling van gezondheidschadeclaims zoals bij kanker (asbest, PAKs), of schildersziekte (oplosmiddelen)
- blootstelling- en risicobeoordelingen in het kader van REACH

Dit werk doen we voor bedrijven, ziekenhuizen, overheden, brancheverenigingen, verzekeraars, advocatenkantoren, zowel nationaal als internationaal (zie [adviesdiensten](#)).

# extended Safety Data Sheet (1)

**Table 9.4.1 Description of Exposure scenario #4: Use of TBAc in Coatings (Professional)**

Section 1	Exposure Scenario Title
Title	Use of Tert Butyl Acetate in Coatings (professional); CAS: 540-88-5
Use Descriptor	Sector of Use: Professional (SU22)
	Process Categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19
	Environmental Release Categories: ERC8A, ERC8C, ER 8D, ERC8F
Processes, tasks, activities covered	Covers the professional use of products containing Tert Butyl Acetate as solvent in coatings, paints, water based paints, adhesives, sealants, including exposures during use (including materials transfer and spraying, brushing and other manual application tasks); and maintenance
Section 2	Operational conditions and risk management measures
Field for additional statements to explain scenario if required.	
Section 2.1	Control of worker exposure
Product characteristics	
Physical form of product	Liquid, vapour pressure 0.5 - 10 kPa at STP [OC4].
Vapour pressure	56 hPa at 20°C
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Amounts used	Not applicable
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2].
Human factors not influenced by risk management	Not applicable
Other Operational Conditions affecting worker exposure	Assumes use at not more than 20°C above ambient temperature [G15].
	Assumes a good basic standard of occupational hygiene is implemented [G1].

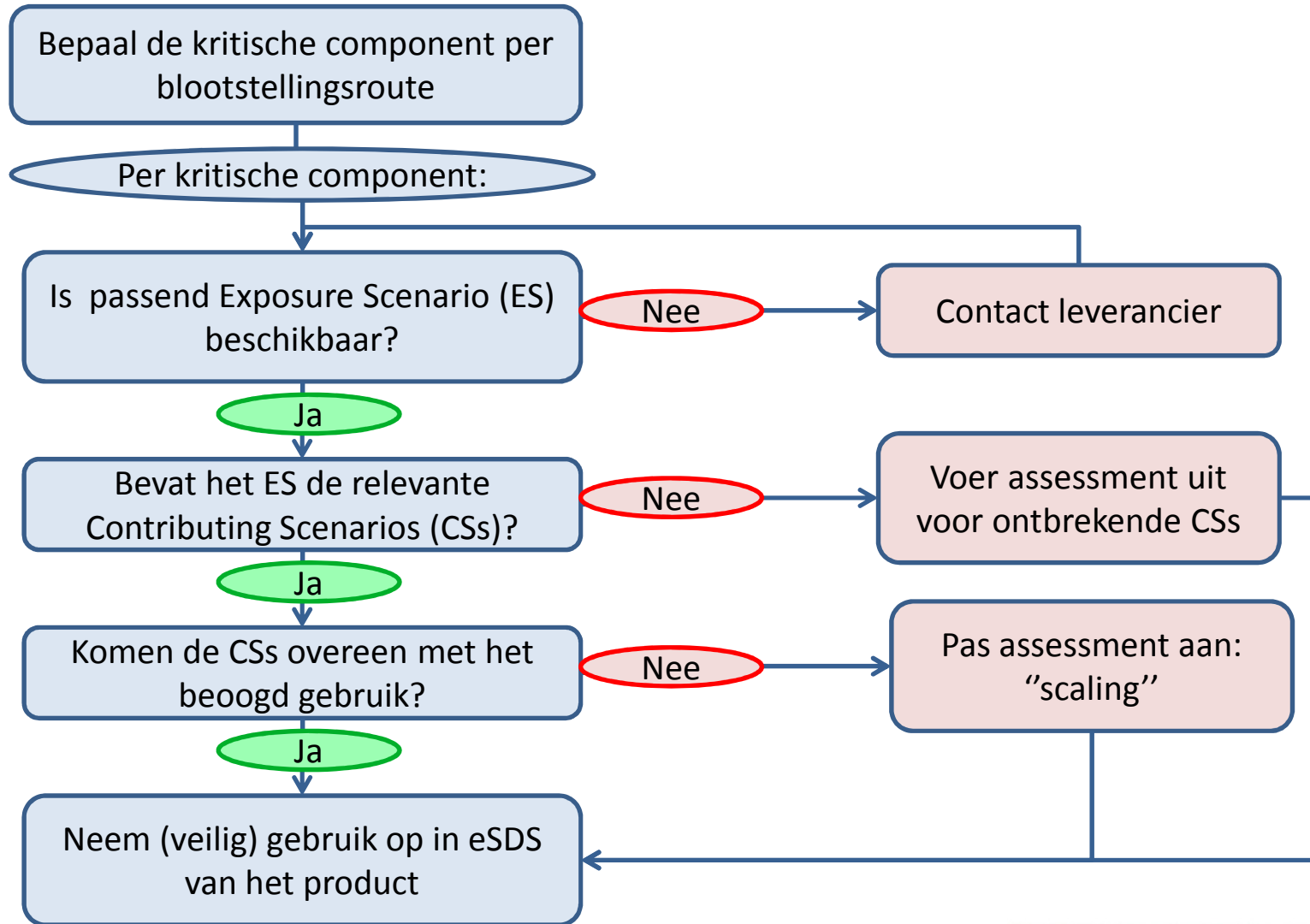
# extended Safety Data Sheet (2)

Contributing Scenarios

Risk-Management Measures

Risk Management Measures	Phrases between brackets are good practice advice beyond REACH Chemical Safety Assessment.
General exposures (closed systems) [CS15].	No specific measures identified [E18].
Filling / preparation of equipment from drums or containers. [CS45].	Handle substance within a predominantly closed system provided with extract ventilation [E49]
General exposures (closed systems) [CS15]. Use in contained systems [CS38].	No specific measures identified [E18].
Preparation of material for application [CS96]. Mixing operations (closed systems) [CS29].	No specific measures identified [E18]. {Use drum pumps or carefully pour from container [E64]}{Clear up spills immediately and dispose of waste safely [E19]. }
Film formation - air drying [CS95]. Outdoor [OC9].	Wear suitable gloves tested to EN374. [PPE15]{Avoid manual contact with wet work pieces [E17]. }
Film formation - air drying [CS95]. Indoor [OC8].	Provide a good standard of controlled ventilation (10 to 15 air changes per hour) [E40]Wear suitable gloves tested to EN374 [PPE15]. {Avoid manual contact with wet work pieces [E17]. }
Preparation of material for application [CS96]. Mixing operations (open systems) [CS30]. Indoor [OC8].	Provide a good standard of controlled ventilation (10 to 15 air changes per hour) [E40]Wear suitable gloves tested to EN374 [PPE15].
Preparation of material for application [CS96]. Mixing operations (open systems) [CS30]. Outdoor [OC9].	Avoid carrying out activities involving exposure for more than 4 hours [OC28], or: [G9]. Wear a respirator conforming to EN140 with Type A filter or better [PPE22]. Wear suitable gloves tested to EN374 [PPE15].
Material transfers [CS3]. Drum/batch transfers [CS8].	Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. [E1]Avoid carrying out activities involving exposure for more than 1 hour [OC27], or: [G9]. Wear a respirator conforming to EN140 with Type A filter or better [PPE22].
Material transfers [CS3]. Drum/batch transfers [CS8]. Dedicated facility [CS81].	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings [E60]
Roller, spreader, flow application [CS98]. Indoor [OC8].	Provide enhanced general ventilation by mechanical means [E48]Wear suitable gloves tested to EN374 [PPE15].
Roller, spreader, flow application [CS98]. Outdoor [OC9].	Limit the substance content in the product to 25 % [OC18]Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. [PPE16]
Manual [CS34]. Spraying [CS10]. Indoor [OC8].	Limit the substance content in the product to 25 % [OC18]Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [E12]Wear suitable gloves tested to EN374 [PPE15].

# Aanpak



## Bepaal de kritische component per blootstellingsroute

De kritische componenten bepalen de te nemen maatregelen (RMMs) bij het gebruik van de verf.

Bepaal voor elk van de blootstellingsroutes de kritische component in de verf:

- longen / luchtwegen
- huid
- maag/darm stelsel
- ogen
- milieu.

Maak gebruik van de DPD+ methode.

<http://cefic.org/templates/shwPublications.asp?HID=750&T=806>

## Bepaal de kritische component per blootstellingsroute - **longen / luchtwegen (1)**

Lead Substance Index (LSI) bepalen voor alle componenten in de verf

- concentratie van de component (  $C_i$  in gewichts %)
- vluchtigheid van de component ( VP )
- klassificatie cutt-off concentratie (  $C_{co}$  in gewichts %)


$$LSI = (C_i \times VP) / C_{co}$$



Bepaal de kritische component per  
blootstellingsroute - **longen / luchtwegen (2)**

COMPONENT	Risico zin	C <sub>i</sub>	VP	C <sub>co</sub>	LSI (C <sub>i</sub> x VP)/C <sub>co</sub>
Butylacetaat	R67	16.8	14.9	15	<b>16.7</b>
Xyleen	R20	4.2	11.2	12.5	5.5
1.2.4-trimethyl benzeen	R20	0.9	2.9	25	0.7
1.2.4-trimethyl benzeen	R37	0.9	2.9	20	0.5
...					

Voor de blootstellingsroute longen / luchtwegen is **Butylacetaat** de kritische component.



R67 = Dampen kunnen slaperigheid en duizeligheid veroorzaken  
R20 = Irriterend voor de luchtwegen.  
R37 = Schadelijk bij inademing

## Bepaal de kritische component per blootstellingsroute – huid (1)

Lead Substance Index (LSI) bepalen voor alle componenten in de verf

- concentratie van de component (  $C_i$  in gewichts %)
- ~~vluchtigheid van de component ( VP )~~
- classificatie cutt-off concentratie % (  $C_{co}$  gewichts %)

$$LSI = C_i / C_{co}$$

Bepaal de kritische component per  
blootstellingsroute – **huid (2)**

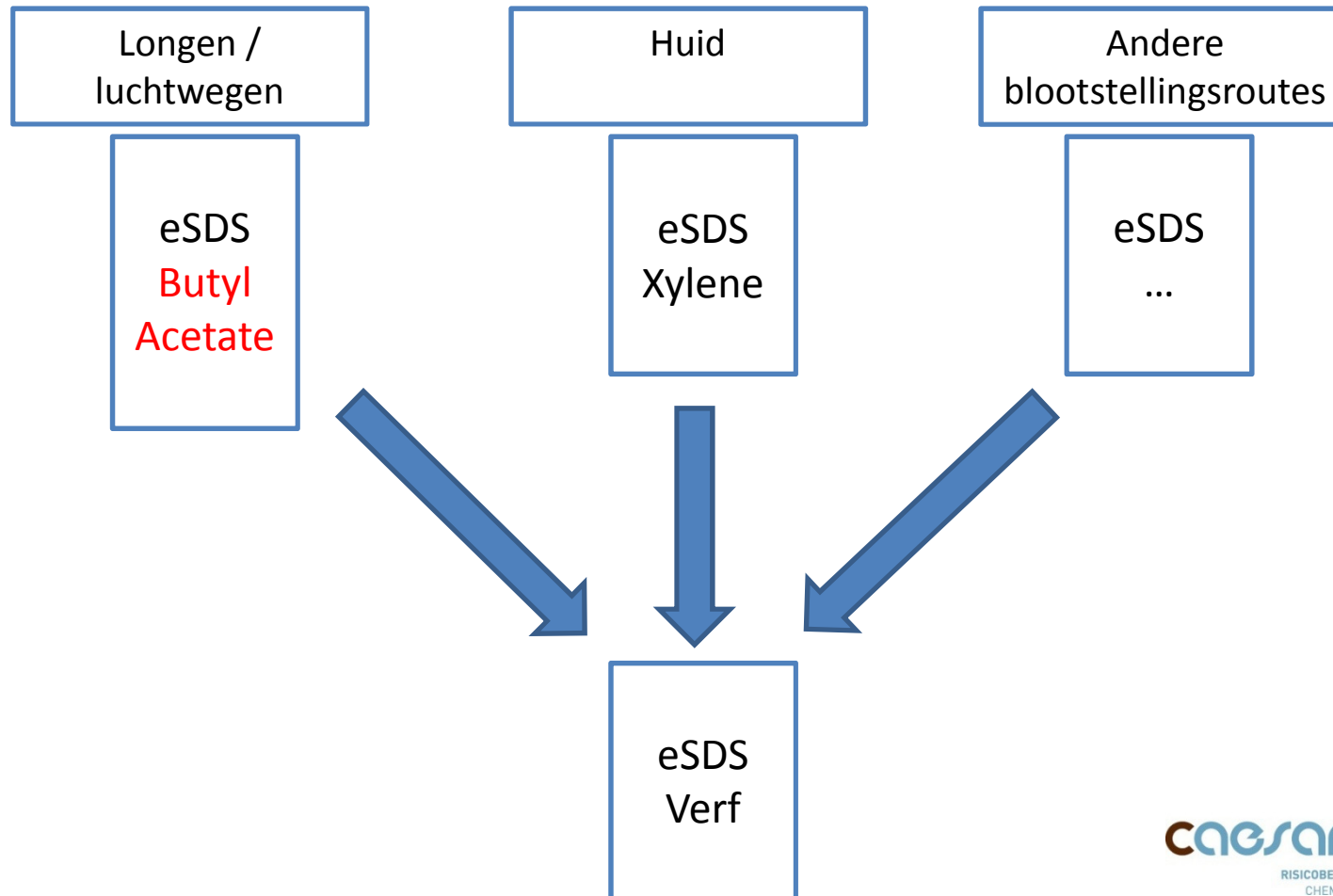
COMPONENT	Risico zin	C <sub>i</sub>	C <sub>co</sub>	LSI C <sub>i</sub> / C <sub>co</sub>
Butyl acetaat	-	-	-	-
Xyleen	R21	4.2	12.5	<b>0.34</b>
Xyleen	R38	4.2	20	0.32
1.2.4-trimethyl benzeen	R38	0.9	20	0.32
...				

Voor de blootstellingsroute huid is **Xyleen** de kritische component.

R21 = Schadelijk bij aanraking met de huid.

R38 = Irriterend voor de huid.

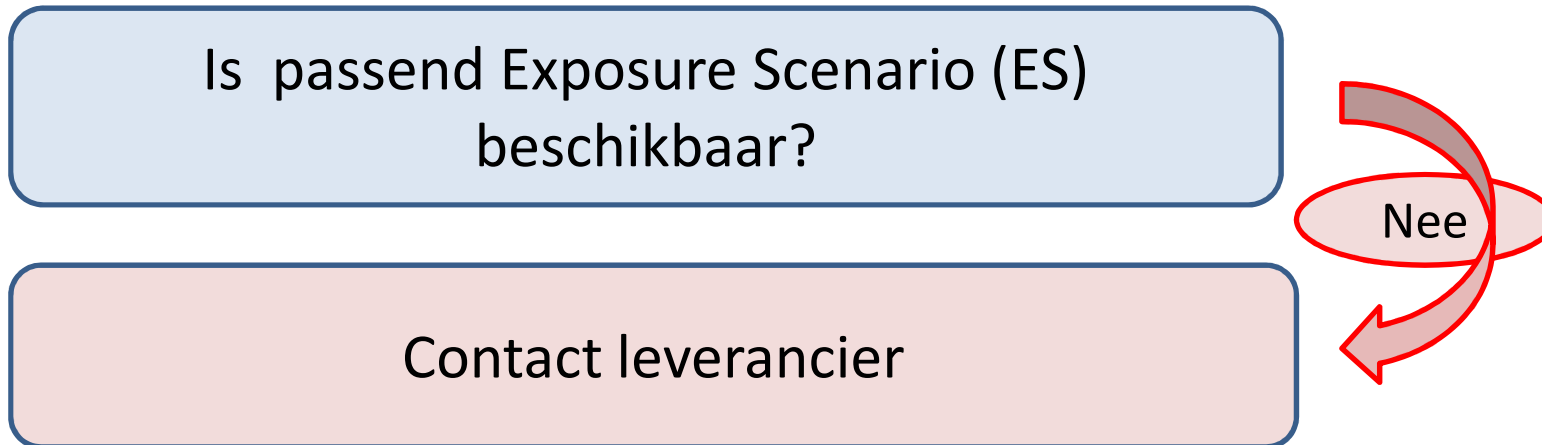
## Bepaal de kritische component per blootstellingsroute



## Is passend Exposure Scenario (ES) beschikbaar?

### *Identified exposure scenario's for TBAC*

<i>Code</i>	<i>Short-title</i>
ES#1	Manufacture of TBAC and Other Substances
ES#2	Loading & Repacking of TBAC
ES#3	Formulation & Packing of Preparations and Mixtures Containing TBAC
ES#4	Use of TBAC in Coatings (Professional)
ES#5	Use of Small Quantities of TBAC within Laboratory Settings (Industrial)
ES#6	Use of Small Quantities of TBAC within Laboratory Settings (Professional)



Verzoek leverancier om het gebruik van de Lead Substance in verf te registreren

Alternatieven:

- Leg zelfde verzoek neer hoger in de keten
- Werk in eigen beheer een Exposure Scenario uit en registreer
- Zoek een leverancier die wel een passend eSDS heeft opgesteld

## Bevat het ES de relevante Contributing Scenarios (CSs)?

*Contributing Scenarios*

*Risk Management Measures*

Risk Management Measures	Phrases between brackets are good practice advice only, see REACH Chemical Safety Assessment.
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## Komen de CSs overeen met het beoogd gebruik?

### Occupational Conditions en Risk Management Measures

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Product characteristics	
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## Neem (veilig) gebruik op in eSDS van het product

Risk Management Measures	<i>Blootstellings route</i>	Phrases between brackets are good practice advice only, beyond REACH Chemical Safety Assessment.
Preparation of material for application [CS96]. Mixing operations (open systems) [CS30]. Indoor [OC8].	<i>Longen / luchtwegen</i>	Provide a good standard of controlled ventilation (10 to 15 air changes per hour) [E40]
	<i>Huid</i>	...
	<i>Ogen</i>	...
	<i>Maag/darm</i>	...
Roller, spreader, flow application [CS98]. Indoor [OC8].	<i>Longen / luchtwegen</i>	Provide enhanced general ventilation by mechanical means [E48]
	<i>Huid</i>	...
	<i>Ogen</i>	...
	<i>Maag/darm</i>	...



Voor scaling is informatie nodig over:

- De gebruikte methode voor blootstellingsschatting
  - Ecetoc TRA
  - Stoffenmanager
  - ART
  - etc.
- Alle input-variabelen die voor de schatting gebruikt zijn
- Inzicht in de blootstellingsreductie door Risk Management Measures

**Tip:** vraag Chemical Safety Assessment tabellen op bij de leverancier

## Take away !

- Het vaststellen van de *Lead Substances* in uw producten is bewerkelijk, maar u kunt er nu al mee beginnen.
- Check bij de leverancier of de *Exposure Scenarios* die van belang zijn worden opgesteld.
- *Scaling* is bewerkelijk en vereist inzicht in en ervaring met schattingsmethoden.

Meer info op: <http://caesar-consult.nl>

of neem contact op met

*Henk Thuis 024 – 352 88 40*