GEIS: Generic Exposure Information Sheet

ENES5 Break-out session L: 21 November 2013

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Content

- Introduction: Detergents sector
- A.I.S.E. Contributing Scenario's
- GEIS: Principles
- Test Case
  - Test Case conclusions
- GEIS Experiences
- GEIS Recap
- Discussion

Professional Detergents sector

Formulators:

- Broad scope of products
- Large array of different ingredients

End users (Institutional):

- Large and small cleaning companies
- Many different uses of products (dilutions)
- Generally limited level of education in chemistry
- Occupational Health Inspectorate (NL): employers need to substantiate safe use → solution needed

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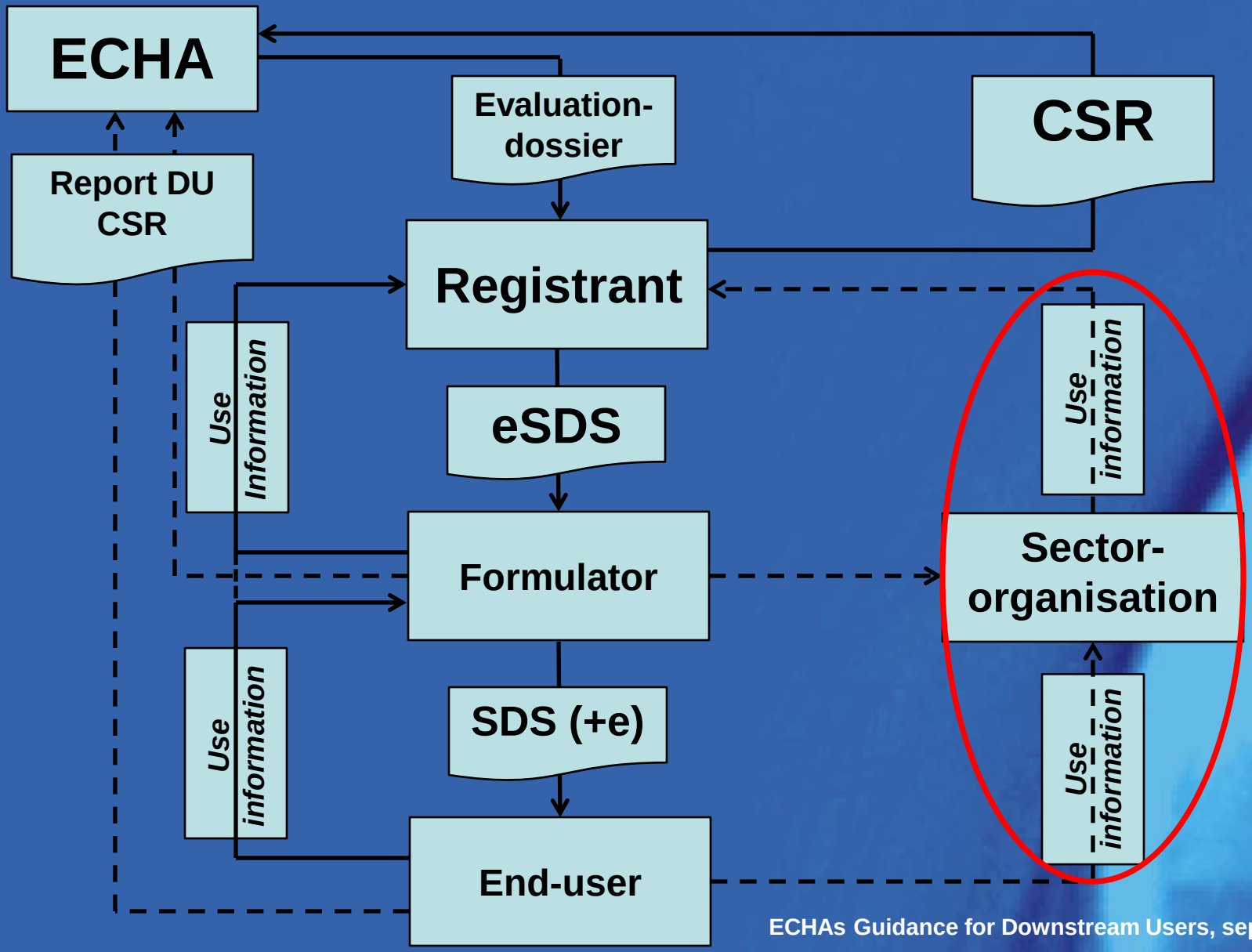
Communication in REACH



ECHAs Guidance for Downstream Users, september 2013

A.I.S.E. Contributing Scenario's

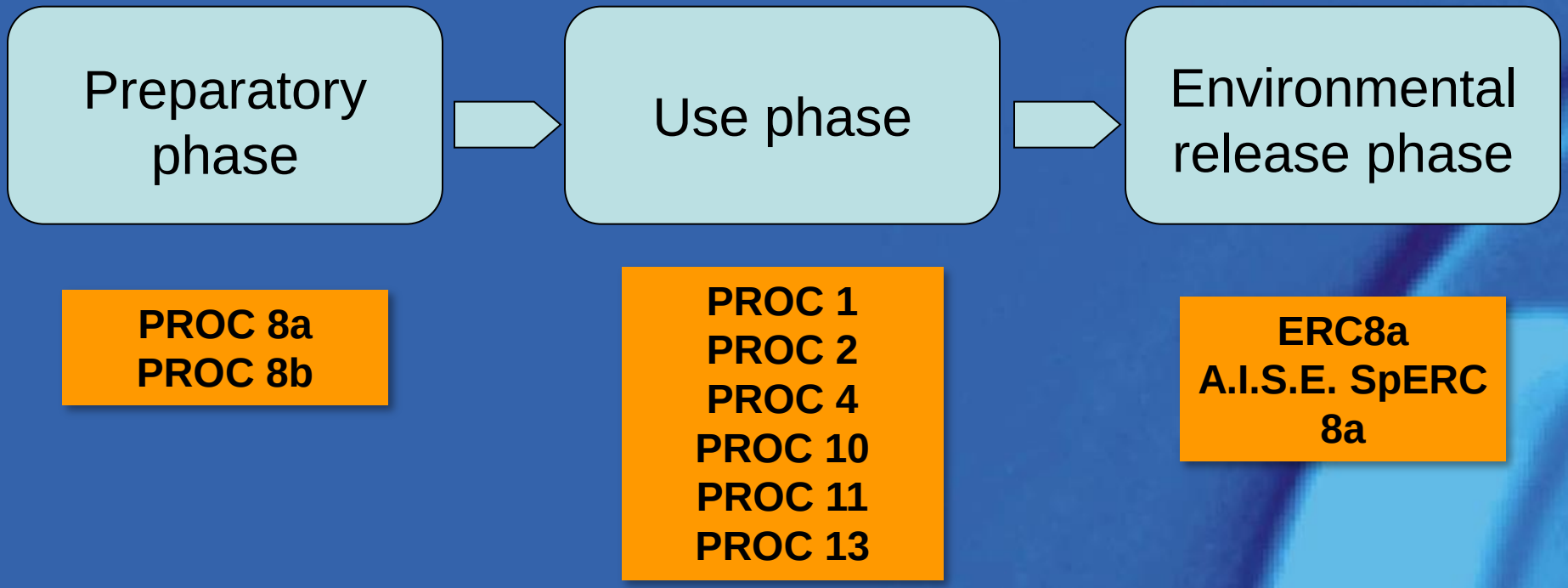
A.I.S.E./NVZ project: standardizing professional cleaning uses (2006 – 2010)

- Cooperation with independent research organization (TNO) and multiple cleaning companies

- Analyzing possible industrial and institutional use processes
  - Type of process (PROC)
  - Duration of process per day
  - Indoors/outdoors, type of ventilation
  - Possible RMMs (suitable for the situation)
  - Average maximum concentration ingredient types

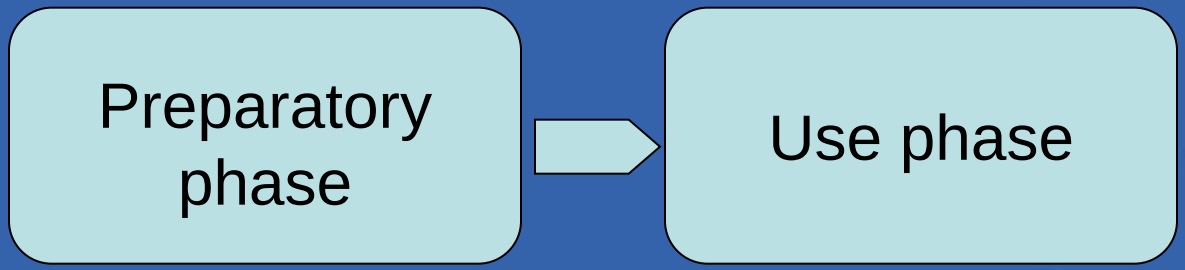
A.I.S.E. Contributing Scenario's

Processes in institutional cleaning



A.I.S.E. Contributing Scenario's

Duration of the processes



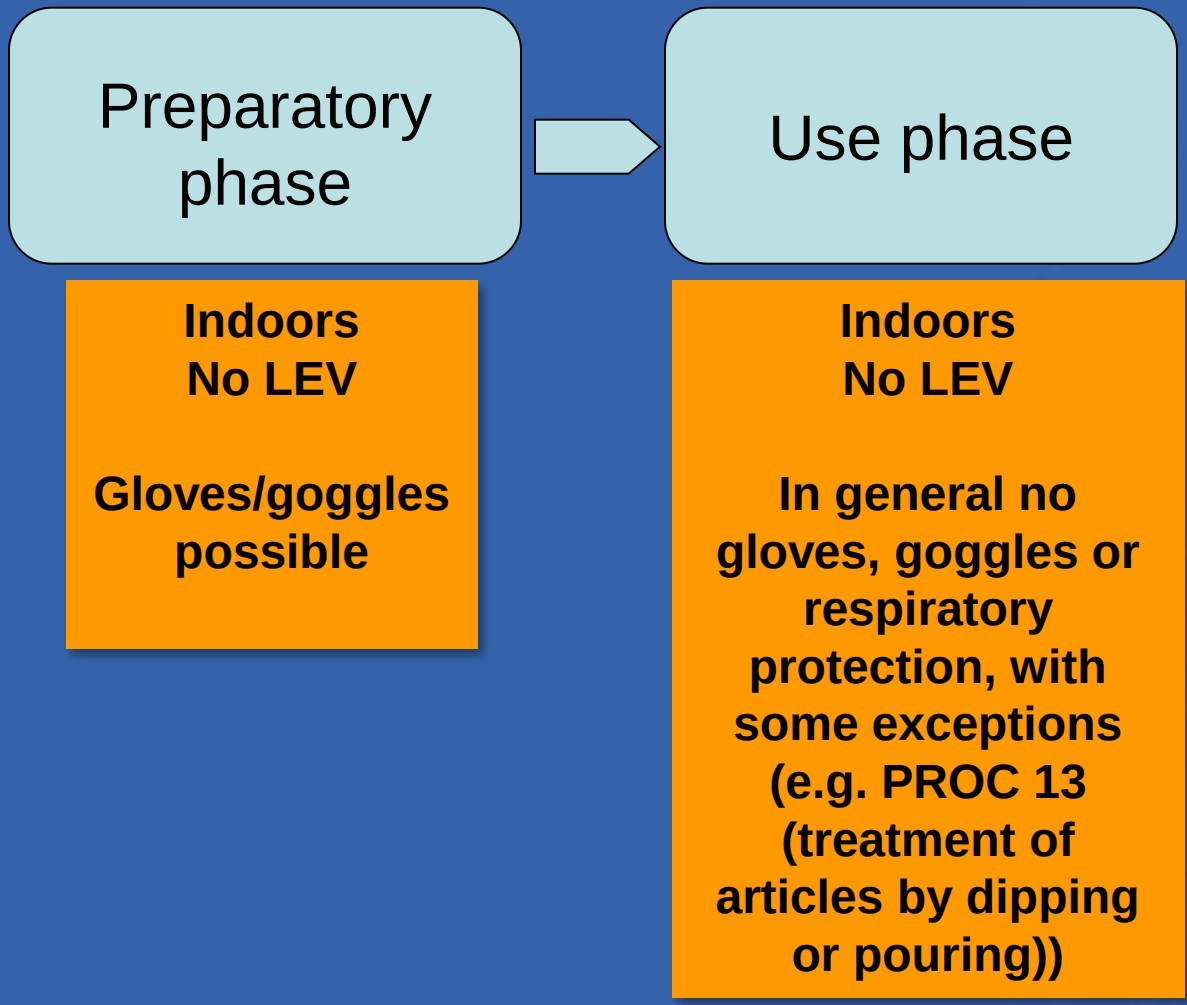
PROC 8a/b Duration < 50 min/day

PROC 1, 2, 4: Up to 8h per day

PROC 11 (Trigger spraying): <40 min/day

A.I.S.E. Contributing Scenario's

Operational conditions & PPE



A.I.S.E. Contributing Scenario's

Average maximum concentration ingredients

Preparatory phase

Max. Surfactant content in product	Max polymeric e.g. Surfactants and waxes	Max. Solvent in product	Max. Base/acid content	Max Builder	Max Hydrotope	Max Bleach	Max Additives	Max perfumes
20	20	15	20	24	10	10	2	2

Use phase

Max. Surfactant content in product	Max polymeric e.g. Surfactants and waxes	Max. Solvent in product	Max. Base/acid content	Max Builder	Max Hydrotope	Max Bleach	Max Additives	Max perfumes
1	1	15	1	0,5	0,5	2	0,2	0,2

A.I.S.E. Contributing Scenario's

- **Analysis result: >150 industrial and institutional uses**

- **Grouping exercise (2011):**
  - 14 Contributing Scenario's for institutional (Professional) use (CSP)
  - 10 Contributing Scenario's for Industrial use (CSI)

- CSP/CSI communicated to Raw Material suppliers
  - At what concentration is the use (CS) safe, considering the determined operational conditions?

A.I.S.E. Contributing Scenario's

Institutional cleaning Use Descriptors

- All CSPs:
  - Sector of Use (SU) 22: Professional
  - Product Category (PC) 35: Washing & cleaning products
  - Environmental Release Category (ERC) 8a
    - Wide dispersive use indoors, open systems
  - A.I.S.E. Specific ERC (SPERC) 8a
    - ERC8a, but taking into account sewage water treatment plants

A.I.S.E. Contributing Scenario's

Operational conditions & Risk Management Measures

- Example all purpose cleaner: combination of three CSP's

CSP01

- Transfer of professional cleaning or maintenance product to cleaning equipment
- PROC8a
- Max. 50 minutes per day, indoors (no LEV) or outdoors, gloves and goggles are used

A.I.S.E. Contributing Scenario's

Operational conditions & Risk Management Measures

- Example all purpose cleaner: combination of three CSP's

CSP03

- Trigger spraying of a professional cleaning or maintenance product during short periods of time
- PROC11
- Max. 40 minutes per day, indoors (no LEV), no gloves or goggles

A.I.S.E. Contributing Scenario's

Operational conditions & Risk Management Measures

- Example all purpose cleaner: combination of three CSP's

CSP09

- Brushing a professional cleaning or maintenance product after trigger spraying
- PROC10
- Max. 220 minutes per day, indoors (no LEV), no gloves or goggles

Questions?

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GEIS – The project

GEIS : Generic Exposure Information Sheet

- **Goal: Standardize and simplify the way of communicating safe use information to end users in our industry sector**

GEIS – The project

Communicating ES information possibilities:

1. **Integrate the information into the main body of the SDS**
2. **Append safe use information for the mixture**
3. **Attach relevant exposure scenarios for the substances in the mixture in an annex**

DU Guidance: “The process should be as efficient as possible, proportionate to the risk, and relevant and understandable to the recipients.”

ECHA’s Guidance for Downstream Users, september 2013

GEIS – The project

GEIS : Generic Exposure Information Sheet

- **Goal: Standardize and simplify the way of communicating safe use information to end users in our industry sector**
- **“Appendix” to the SDS of professional cleaning products**
- **Using standardized use processes: A.I.S.E. Contributing Scenario’s**
- **Easy to understand and use by cleaning companies (SMEs)**
- **Easy to implement for formulators (EU-wide)**

GEIS – Communication

- **Generic GEIS documents created for each CSP**
- **Formulator determines from (hazardous) ingredient eSDSs for which CSP the product is appropriate/safe**
- **Relevant CSPs mentioned in product SDS (Section 1)**
  - Relevant GEIS CSP documents as appendix to SDS; or
  - All GEIS documents and end user guidance supplied once to all customers
    - GEIS documents also available online
- **Ensuring communication of GEIS approach: Guidances**
  - End-User guidance and Formulator guidance

GEIS – Example

GEIS: CSP01

Version: 3.1, October 2013

Transfer of professional cleaning or maintenance product (charging/discharging) to a cleaning equipment (machine/vessel/bucket)

Formulators have the obligation under REACH to evaluate the safe use information on raw materials that they receive, and using that information communicate the safe use conditions of their mixtures to their customers.

If a GEIS CSP code is mentioned in Section 1 of the SDS of a product, the formulator of that product declares that all substances in the mixture are present in such concentration, that the use of the product within the conditions of the GEIS CSP documents is safe. When available, this safe use is ensured by evaluating the results of the chemical safety assessments as performed by the raw material suppliers. When no chemical safety assessment has been carried out by the supplier of an ingredient in the mixture, the formulator has, within the conditions of REACH, performed a safety assessment himself.

This is a generic document. When composing work instructions for cleaning- or maintenance products for your employers, always use this document in combination with the SDS of the product.

Use descriptors	
SU 22	Professional use
PC 35	Washing and cleaning product
PROC 8a	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
ERC 8a	Wide dispersive indoor use of processing aids in open systems
AISE SpERC 8a.1.a.v1	Wide dispersive use in "Down the drain" cleaning and maintenance products. Wastewater should be treated by a municipal STP in accordance with this SPERC

Properties of product composition
In Section 2 of the SDS of products and on the label, the classification of the product is provided. CSP01 is based on the undiluted product.
The classification of a product is based on the classified ingredients in the products. All ingredients contributing to the classification of the mixture are mentioned in Section 3 of the SDS.
Relevant limit values of the ingredients on which the exposure assessment is based, are stated in Section 8 of the SDS.
This product may contain sensitizing ingredients, that may cause an allegric reaction in certain people. Section 15 of the SDS states these ingredients, when applicable to the product.

Environmental measures
Prevent that the undiluted product reaches surface waters.

Operational conditions	
Maximum duration	50 minutes per day
Process conditions	Process is carried out at room temperature
	In case of dilution, tap water at a maximum temperature of 45 degrees Celcius is used
	No LEV needed; good general ventilation at workplace is sufficient

Risk management measures	
Conditions and measures related to personal protection equipment (PPE), hygiene and health evaluation	Use gloves and safety goggles. See chapter 8 of the SDS of this product for specifications. 
	Training of the worker in relation to proper use and maintenance of the PPE must be ensured.

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet.
	Use good occupational hygiene practices as specified in section 7 of the SDS of the used product.
	Avoid splashing. If splashing cannot be avoided, use protective clothing.

GEIS – Example (CSP01)

Nederlandse Vereniging van Zeepfabrikanten

GEIS: CSP01

Version: 3.1, October 2013

Transfer of professional cleaning or maintenance product (charging/discharging) to cleaning equipment (machine/vessel/bucket)

Formulators have the obligation under REACH to evaluate the safe use information on raw materials that they receive, and using that information communicate the safe use conditions of their mixtures to their customers.

If a GEIS CSP code is mentioned in Section 1 of the SDS of a product, the formulator of that product declares that all substances in the mixture are present in such concentration, that the use of the product within the conditions of the GEIS CSP documents is safe. When available, this safe use is ensured by evaluating the results of the chemical safety assessments as performed by the raw material suppliers. When no chemical safety assessment has been carried out by the supplier of a dangerous substance, the formulator has ensured the safe use of that substance in the mixture himself.

This is a generic document. When composing work instructions for cleaning- or maintenance products for your employees, always use this document in combination with the SDS of the product.

GEIS – Example (CSP01)

Use descriptors	
SU 22	Professional use
PC 35	Washing and cleaning product
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GEIS – Example (CSP01)

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The classification of a product is based on the classified ingredients in the products. All ingredients contributing to the classification of the mixture are mentioned in Section 3 of the SDS.
Relevant limit values of the ingredients on which the exposure assessment is based, are stated in Section 8 of the SDS.
This product may contain sensitizing ingredients, that may cause an allegric reaction in certain people. Section 15 of the SDS states these ingredients, when applicable to the product.

GEIS – Example (CSP01)

Environmental measures
Prevent that the product directly reaches surface waters.

Operational conditions	
Maximum duration	50 minutes per day
Process conditions	Process should be carried out at room temperature
	In case of dilution, tap water at a maximum temperature of 45 degrees Celcius should be used
	No LEV needed; good general ventilation at workplace is sufficient

Risk management measures	
Conditions and measures related to personal protection equipment (PPE), hygiene and health evaluation	Use gloves and safety goggles. See chapter 8 of the SDS of this product for specifications. 
	Training of the worker in relation to proper use and maintenance of the PPE must be ensured.

GEIS – Example (CSP09, dilution)

Environmental measures
Prevent that the product directly reaches surface waters.

Operational conditions	
Maximum duration	220 minutes per day
Process conditions	Process should be carried out at room temperature
	No LEV needed; good general ventilation at workplace is sufficient

Risk management measures	
Conditions and measures related to personal protection equipment (PPE), hygiene and health evaluation	No PPE necessary.

GEIS – Example (Undiluted CSPs)

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet.
	Use good occupational hygiene practices as specified in section 7 of the SDS of the used product.
	Avoid splashing. If splashing cannot be avoided, use protective clothing.

GEIS – Example (Diluted CSPs)

Good practise advice	
Don't eat or drink, don't smoke, no open flame	
Wash hands after use Avoid contact with damaged skin Do not mix with other products	
Spillage instructions	Dilute with water and mop up.
Additional good practice advice	Follow the product instructions as specified on the label or in the product information sheet.
	Use good occupational hygiene practices as specified in section 7 of the SDS of the used product.

GEIS – Future

- **Consider appropriate fixed format for product-uses not covered by GEIS**
  - >90% institutional uses covered by current GEIS
    - Possibility of adding CSPs when deemed appropriate by A.I.S.E.

- **Help stimulating and explaining GEIS to all concerned parties in NL**
  - Guidances for end-users and formulators
  - Cooperation with national institutional cleaning sector organization

GEIS – Future

- **GEIS for Industrial use: coordination & alignment with institutional GEIS by A.I.S.E.**
- **European-wide application of GEIS in detergents sector**
- **Sharing experience with other sectors to help stimulate better safe use communication**
  - CEFIC/DUCC TF on Generic Exposure Scenarios (GES) for Mixtures

GEIS – Summary

- Method to comply to REACH downstream-communication obligation for formulators

- Instrument for communicating conditions of safe use to cleaning companies
  - Efficient, standardized and easy-to-read safe use information on mixtures
  - Easy to convert to workplace instructions

- Formulators still need to (manually) check ESs for uses
  - Diversity of products, uses and ingredients: fully automated approach difficult

Questions?

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Test Case

Test formulation: Sanitary cleaner

- Acid cleaner for sanitary use
- Used undiluted for tough stains
  - CSP10: Brushing with an undiluted product
- Used diluted for “all purpose” sanitary cleaning
  - CSP01: Diluting (at least 1:10)
  - CSP08: Brushing with dilution

Test Case

Sanitary cleaner: formulation (Undiluted)

Substance	Type of ingredient	Classified (CLP)?	Conc. (%)	Contributing to mixture classification?
Water	Solvent	No	80,14	No
Phosphoric acid	Acid	Yes	9,8	Yes
Sulphamidic acid	Acid	Yes	4	Yes
ABS	Surfactant	Yes	6,0077	Yes
Perfume X	Perfume	Yes	0,05	No
Colorant X	Additive/Color	No	0,0035	No

- **Classification mixture:**
  - H314: Causes severe skin burns and eye damage

Test Case

Sanitary cleaner: formulation (Dilution 1:10)

Substance	Type of ingredient	Classified (CLP)?	Conc. (%)	Contributing to mixture classification?
Water	Solvent	No	98,01	No
Phosphoric acid	Acid	Yes	0,98	No
Sulphamidic acid	Acid	Yes	0,4	No
ABS	Surfactant	Yes	0,6	No
Perfume X	Perfume	Yes	0,005	No
Colorant X	Additive/Color	No	0,00035	No

- **Classification diluted mixture:**
  - Not classified
  - Use of dilution is safe (CSP08)

Test Case

Sanitary cleaner: formulation (Undiluted)

Substance	Type of ingredient	Classified (CLP)?	Conc. (%)	Contributing to mixture classification?
Water	Solvent	No	80,14	No
Phosphoric acid	Acid	Yes	9,8	Yes
Sulphamidic acid	Acid	Yes	4	Yes
ABS	Surfactant	Yes	6,0077	Yes
Perfume X	Perfume	Yes	0,05	No
Colorant X	Additive/Color	No	0,0035	No

- **Classification mixture:**
  - H314: Causes severe skin burns and eye damage

Test Case

Check for each substance contributing to classification:

- **ES available?**
  - No → is a REACH registration number mentioned?
    - Yes → ES should be available, contact your supplier
    - No → Wait for update (2018 registration deadline) or perform own safety assessment
  - Yes → Check ES for CSP (SU22/PC35, PROCs, ERC8a, duration, RMM, etc.)

Test Case

Ingredient	ES?	Supplier	REACH Reg#	CAS-number	EG-number	Type	Concentration-limit		Dur-ation	LEV	PPE
	Y / N						Min.	Max.	Minutes / day	Y / N	H=Hand E=Eyes R=Resp
Sulphamidic acid											
Phosphoric acid											
ABS											

Ingredient	PROC 1	PROC 2	PROC 4	PROC 8a	PROC 8b	PROC 10	PROC 11	PROC 13	PROC 15
Sulphamidic acid									
Phosphoric acid									
ABS									

Ingredient	CSP1	CSP2	CSP3	CSP4	CSP5	…	CSP14
Sulphamidic acid							
Phosphoric acid							
ABS							

Test Case

Ingredient	Concentration-limit		Dur-ation	LEV	PPE	PROC8a	PROC10
	Min.	Max.	Min. / day	Y / N	H=Hand E=Eyes R=Resp		
Sulphamidic acid							
Phosphoric acid							
ABS							

Test Case: ES Sulphamidic Acid

N°.	Korte titel	Hoofdgebruikersgroep (SU)	Gebruikssector	Productcategorie (PC)	Procescategorie (PROC)	Milieu-emissiecategorie (ERC)	Voorwerpcategorie (AC)	Specificatie
1	Productie van harsen	3	8	32	4, 5, 8a, 8b, 15	1, 2, 6d	NA	ES11051
2	Gebruik als weekmaker	22	NA	32	2, 8a, 8b, 10, 11, 16, 17, 20	8a, 8d, 9a, 9b	NA	ES11055
3	Formulering van pigmenten	3	NA	34	5	2, 4	NA	ES11053
4	Gebruik als additief	3	NA	1	5, 8a, 8b	2, 6d	NA	ES11060
5	Formulering van reinigingsmiddelen	3	10	3, 8, 14, 15, 20, 23, 26, 31, 35, 38	3, 4, 5, 7, 8a, 8b, 9, 13, 15	2	NA	ES10914
6	Toepassing in reinigingsmiddelen *	22	2b	3, 8, 13, 15, 31, 35	1, 2, 4, 5, 8a, 8b, 9, 10, 11, 13, 16, 17, 19, 20	8a, 8b, 8d, 9a, 9b	NA	ES11041

*: Use in cleaning products

1. Verkorte titel van het blootstellingsscenario 6: Toepassing in reinigingsmiddelen	
Hoofdgebruikersgroepen	SU 22: Professioneel gebruik: Publiek domein (administratie, onderwijs, amusement, dienstverlening, ambachtslieden)
Eindgebruiksectoren	SU2b: Offshore-industrie
Chemisch product-categorie	PC3: Luchtverfrissers PC8: Biociden PC13: Brandstoffen PC15: Producten voor het behandelen van niet-metalen oppervlakken PC31: Glansmiddelen en wasmengsels PC35: Was- en reinigingsmiddelen (inclusief op oplosmiddelbasis)
Procescategorieën	PROC1: Gebruik in een gesloten proces, blootstelling niet waarschijnlijk PROC2: Gebruik in een gesloten, continu proces met incidentele, beheerste blootstelling PROC4: Gebruik in een batchproces of ander proces (synthese) met kans op blootstelling PROC5: Mengen in batchprocessen om preparaten en voorwerpen te formuleren (multistage en/of aanzienlijkcontact) PROC8a: Overbrengen van een stof of preparaat (vullen/leeg laten lopen) van/naar vaten/grote containers in nietgespecialiseerde voorzieningen PROC8b: Overbrengen van een stof of preparaat (vullen/leeg laten lopen) van/naar vaten/grote containers in gespecialiseerde voorzieningen PROC9: Overbrengen van een stof of preparaat naar kleine containers (gespecialiseerde vullijn, inclusief wegen) PROC10: Met roller of kwast aanbrengen
Milieu-emissiecategorieën	ERC8a: Wijdverbreid gebruik (binnen) van verwerkingshulpmiddelen in open systemen ERC8b: Wijdverbreid gebruik (binnen) van reactieve stoffen in open systemen ERC8d: Wijdverbreid gebruik (buiten) van verwerkingshulpmiddelen in open systemen ERC9a: Wijdverbreid gebruik (binnen) van stoffen in gesloten systemen ERC9b: Wijdverbreid gebruik (buiten) van stoffen in gesloten systemen

Test Case: ES Sulphamidic Acid

2.2 Bijdragescenario dat de blootstelling van de werknemer beheerst voor: PROC1, PROC2, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC16, PROC17, PROC19, PROC20		
Productkarakteristieken	Concentratie van de stof in het mengsel/artikel	Stofconcentratie: 3% - 15%
	Fysische vorm (tijdens gebruik)	vloeibaar
	Verwerkingstemperatuur	< 60 °C
Gebruikte hoeveelheid	Hoeveelheid gebruikt op werkplek	7 - 1000 ton(nen)/jaar
Frequentie en duur van het gebruik	Blootstellingsduur per dag	15 - 60 min

Test Case: ES Sulphamidic Acid

Voorwaarden en maatregelen met betrekking tot persoonlijke bescherming, hygiëne en gezondheidsevaluatie	Beschermende handschoenen dragen. Gebruik geschikte oogbescherming. * Indien nodig: Draag geschikte beschermende kleding. Gas/damp/spuitnevel niet inademen. ademhalingsbescherming

*** : Wear protective gloves.**
Use suitable eye protection.

Werknemers
ECETOC TRA-model gebruikt.

Test Case

Ingredient	Concentration-limit		Dur-ation	LEV	PPE	PROC8a	PROC10
	Min.	Max.	Min. / day	Y / N	H=Hand E=Eyes R=Resp		
Sulphamidic acid	3	15	60	N	H+E	Y	Y
Phosphoric acid							
ABS							

Test Case: ES Phosphoric Acid

No.	Short title	Main User Group (SU)	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environmental Release Category (ERC)	Article Category (AC)	Specification
1	Manufacture of substance	3	8, 9	NA	1, 2, 3, 4, 8b, 9, 15	1	NA	ES1433
2	Industrial use	3	8, 9, 10, 15, 16, 17	0, 1, 7, 9a, 9b, 13, 14, 19, 20, 21, 23, 24, 25, 26, 32, 34, 35, 37, 39	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 14, 15, 19, 22, 23	2, 3, 4, 6a, 6b, 6d	NA	ES1460
3	Professional use	22	1, 19	9a, 9b, 12, 14, 15, 31, 35, 37, 38	5, 8a, 8b, 9, 10, 11, 13, 19, 25	8a, 8b, 8c, 8e	NA	ES1470
4	Use in Cleaning Agents	21	NA	0, 12, 28, 31, 35, 38, 39	NA	8a, 8b, 8e, 10a, 11a	NA	ES1513

1. Short title of Exposure Scenario 3: Professional use	
Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	SU1: Agriculture, forestry, fishery SU19: Building and construction work
Chemical product category	PC9a: Coatings and paints, thinners, paint removers PC9b: Fillers, putties, plasters, modelling clay PC12: Fertilizers PC14: Metal surface treatment products, including galvanic and electroplating products PC15: Non-metal-surface treatment products PC31: Polishes and wax blends PC35: Washing and cleaning products (including solvent based products) PC37: Water treatment chemicals PC38: Welding and soldering products (with flux coatings or flux cores), flux products
Process categories	PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8b: Wide dispersive indoor use of reactive substances in open systems ERC8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8e: Wide dispersive outdoor use of reactive substances in open systems

Test Case: ES Phosphoric Acid

2.2 Contributing scenario controlling worker exposure for: PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC19, PROC25

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations more than 25%
	Physical Form (at time of use)	liquid, solid
Frequency and duration of use	Frequency of use	220 days/year
	The maximum duration considered for this exposure scenario is a working shift of above 4h/day (worst case assumption)	
	Frequency of use	8 hours/day
Organisational measures to prevent /limit releases, dispersion and exposure	Because the substance is corrosive, the risk management measures for human health should focus on the prevention of direct contact with the substance	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection and gloves. Wear suitable coveralls to prevent exposure to the skin.	

Workers

ECETOC TRA

Test Case

Ingredient	Concentration-limit		Dur-ation	LEV	PPE	PROC8a	PROC10
	Min.	Max.	Min. / day	Y / N	H=Hand E=Eyes R=Resp		
Sulphamidic acid	3	15	60	N	H+E	Y	Y
Phosphoric acid	25	100	480	N	H+E	Y	Y
ABS							

Test Case: ES ABS

Sectors of use:

SU22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen).

Process categories:

PROC1: Use in closed process, no likelihood of exposure;

PROC2: Use in closed, continuous process with occasional controlled exposure;

PROC3: Use in closed batch process (synthesis or formulation);

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises;

PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact);

PROC8a: Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at non-dedicated facilities;

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities;

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing);

PROC10: Roller application or brushing;

Product categories:

PC3: Air care products;

PC24: Lubricants, greases, release products;

PC35: Washing and cleaning products (including solvent based products);

PC39: Cosmetics, personal care products.

Environmental release categories:

ERC8a: Wide dispersive indoor use of processing aids in open systems.

Test Case: ES ABS

11a .3. Contributing scenarios controlling worker exposure	
Product characteristics	
Physical form:	Liquid, vapour pressure < 0.5 kPa
Concentration in preparations:	5 - 25%
Frequency and duration of use	
Duration of Exposure:	> 4 hours/ day
Operational conditions affecting workers exposure	
Place of Use:	Indoors (professional settings)

11a.4. Exposure estimation and reference to its sources
Workers exposure has been estimated using ECETOC TRA tool.

11a.5. Guidance to DU to evaluate whether he works inside the boundaries set by the ES
When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, resulting risk characterization ratios are expected to be less than 1. Confirm that the adopted RMMs and OCs are as described or of equivalent efficiency.

Section 8: Wear gloves and goggles

Test Case

Ingredient	Concentration-limit		Dur-ation	LEV	PPE	PROC8a	PROC10
	Min.	Max.	Min. / day	Y / N	H=Hand E=Eyes R=Resp		
Sulphamidic acid	3	15	60	N	H+E	Y	Y
Phosphoric acid	25	100	480	N	H+E	Y	Y
ABS	5	25	480	N	H+E	Y	Y

- CSP01: PROC 8a, H+E, 50 min.
- CSP08: PROC 10, No PPE, 480 min. (dilution)
- CSP10: PROC 10, H+E, 120 min.

% in test formulation (undiluted)	Ingredient	CSP01	CSP08	CSP10
4%	Sulphamidic acid	<15%	< CL*	?
9,8%	Phosphoric acid	<100%	< CL*	<100%
6,0%	ABS	<25%	< CL*	<25%

*: Dilution not classified

Test Case

Test formulation: Sanitary cleaner (CSP01, 08, 10)

Sulphamidic acid: not assessed for CSP10 criteria

- **Communicate to supplier**

- **Possibilities for use of GEIS:**
  - **Wait for an update of supplier**
  - **Perform scaling or own evaluation (e.g. ECETOC TRA)**

Scaling

- Scaling: Solely using scaling possibilities of exact same model used by supplier to assess exposure
  - So far: only when change in Risk Characterization Ratio (=Exposure/DNEL) is negligible or lower!

- Sulphamidic acid: ECETOC TRA model used

- ECETOC TRA Scaling possibilities: Exposure Modifying Factors (EMF)

Duration of activity	Exposure modifying factor
>4 hours (default)	1
1 - 4 hours	0,6
15 mins to 1 hour	0,2
less than 15 mins	0,1

Concentration in mixture	Exposure modifying factor
>25%	1
5-25%	0,6
1-5%	0,2
<1%	0,1

Scaling

- Sulphamidic acid ES:
  - Covers concentrations 3-15% TRA: 5-25%
  - Covers duration 15-60 minutes TRA: 15 min. to 1 hour

- CSP10:
  - Sulphamidic acid in mixture: 4% TRA: 1-5%
  - Duration of activity: 120 minutes TRA: 1 – 4 hours

Duration of activity	Exposure modifying factor
>4 hours (default)	1
1 - 4 hours	0,6
15 mins to 1 hour	0,2
less than 15 mins	0,1

Concentration in mixture	Exposure modifying factor
>25%	1
5-25%	0,6
1-5%	0,2
<1%	0,1

Scaling

- **Changes in exposure**
  - Duration EMF: Exposure*3
  - Concentration EMF: Exposure/3
- **Effectively, exposure (and thus RCR) will not change**
- **CSP10 criteria safe**

Duration of activity	Exposure modifying factor
>4 hours (default)	1
1 - 4 hours	0,6
15 mins to 1 hour	0,2
less than 15 mins	0,1

Concentration in mixture	Exposure modifying factor
>25%	1
5-25%	0,6
1-5%	0,2
<1%	0,1

Test Case Result

Ingredient	Concentration-limit		Dur-ation	LEV	PPE	PROC8a	PROC10
	Min.	Max.	Min. / day	Y / N	H=Hand E=Eyes R=Resp		
Sulphamidic acid	3	15	60	N	H+E	Y	Y
Phosphoric acid	25	100	480	N	H+E	Y	Y
ABS	5	25	480	N	H+E	Y	Y

- CSP01: PROC 8a, H+E, 50 min.
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% in test formulation (undiluted)	Ingredient	CSP01	CSP08	CSP10
4%	Sulphamidic acid	<15%	< CL*	<5% (Scaling)
9,8%	Phosphoric acid	<100%	< CL*	<100%
6,0%	ABS	<25%	< CL*	<25%

*: Dilution not classified

Test Case Result

Test formulation: Sanitary cleaner (CSP01, 08, 10)

- Proven safe use of product by end-user
- Section 1 of product SDS:
  - GEIS CSP01, GEIS CSP08, GEIS CSP10
- Append the three GEIS to product SDS or send customers all GEIS once
- Ensure that customer knows what to do/how to read GEIS
  - GEIS End-User Guidance

Test Case Conclusions

- Able to prove safe use of product through information received from suppliers, but:

- Quality and readability eSDSs are not consistent
  - Differences between suppliers
  - PPEs: mandatory VS optional (“when necessary”)

- Communication in supply chain still needs improvement
  - Identified end-uses institutional cleaning (CSPs) not always assessed by supplier

Content

- Introduction: Detergents sector
- A.I.S.E. Contributing Scenario's
- GEIS: Principles
- Test Case
  - Test Case conclusions
- GEIS Experiences
- GEIS Recap
- Discussion

GEIS Experiences

Occupational Health Laws versus REACH

- Occupational Law: Employers must evaluate all risks to the safety and health of workers and implement measures which assure safe work (minimize risks)

- REACH: Evaluation of risks dangerous substances, communication of safe use conditions

- National Occupational Health Authorities (Inspectorates)
  - Accepting REACH information ((e)SDSs) as substantiation of safe use measures: complying with Occupational obligations
  - Preventing unnecessarily re-doing chemical safety assessment further down in supply chain

GEIS Experiences

Necessity of knowing recipients of mixture SDS+ES

- Institutional cleaning companies:
  - Hard to understand current product SDS
    - Prevent unnecessarily complicating SDS further
  - Low education level (chemistry) of actual end-users (cleaners)
  - Many SME companies: Few or no employees properly educated yet to convert the additional ES information to clear workplace instructions

GEIS Experiences

Necessity of cooperation within/between sectors

- Role of sector organization (A.I.S.E) in facilitating communication of use information in supply chain

- Role of national organizations to communicate with:
  - National authorities
    - Occupational Health Inspectorates
    - REACH
  - Organizations in end-user sector
    - Combining efforts to educate whole sector on REACH (GEIS)
    - Cleaning companies very positive towards GEIS approach

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GEIS Recap

- Minimum input requirements to apply GEIS approach?
  - eSDSs covering all CSP identified uses (registered substances contributing to mixture classification)
  - If missing: wait for update or perform own evaluation (ECETOC TRA, Scaling, DU CSA)

- Practical issues one can run into while applying GEIS?
  - Lacking consistency of eSDSs, language of ES

- Level of expertise needed for GEIS approach?
  - Medium to high (Formulators): reading/checking eSDSs, principles of ECETOC TRA/Scaling
  - Low (End-User)

GEIS Recap

- Time needed to apply methodology?
  - Depending on situation (need for scaling, own assessment)
  - ES checking exercise can be done once per substance for multiple uses/products

Thank you for your attention!

- Questions?

- Discussion

Question for discussion

- Situation: One dangerous substance of a formulation, contributing to the classification of the mixture, does not contain a suitable ES for an applicable CSP. The formulator informs his supplier and asks to include that CSP as an identified use.

- While waiting for the new eSDS of his supplier, the formulator decides to use the same exposure model and substance properties that the supplier used to assess the new identified use, and finds out the use of the CSP is safe (RCR of well below 1). Now he is able to send the appropriate GEIS documents of that product to his customers, without having to wait for the update from the supplier.

- **Is this considered a DU assessment?**