Cosmetics Europe SPERC fact sheet - Wide Dispersive Use of Cosmetic Products

Section	Content	
SPERC Title	Wide Dispersive Use of Cosmetic Products	
SPERC code		
	Cosmetics Europe 8a.1.a.v2: Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals) Cosmetics Europe 8a.1.b.v2 Wide Dispersive Use in Aerosol products for hair and skin care (Propellants) Cosmetics Europe 8a.1.c.v2 Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants)	
Scope		
	Covers the use of substances in cosmetic products (e.g. hair care, oral care, body care and deodorants) for end users. *Substance Domain:* Cosmetics Europe 8a.1.a.v2: 'Down the Drain' products: All substances Cosmetics Europe 8a.1.b.v2: Aerosol products (Propellants): Volatiles Cosmetics Europe 8a.1.c.v2: Aerosol products (Non-Propellants): Non-volatiles	
Related use descriptors		
	Main User Group: SU 21	
	Sector of Use: SU21	
	Environmental Release Class: ERC 8a	
	Process Categories: n/a	
	Product categories: PC 39	
Operational conditions		**Operational conditions – Phrases**
	Cosmetics Europe 8a.1.a.v2 Cosmetics Europe 8a.1.b.v2 Cosmetics Europe 8a.1.c.v2	Indoor use, Professional and Consumer product use leading to disposal via the wastewater, Professional and Consumer product use with limited or no technical control of emission.
Obligatory onsite RMMs		**RMM - Phrase** **RMM-Efficiency (RE$_{SPERC}$)**
	Cosmetics Europe 8a.1.a.v2	No wastewater treatment required 0
	Cosmetics Europe 8a.1.b.v2	0
	Cosmetics Europe 8a.1.c.v2	0

Substance use rate	Characteristics of specific ERC	Type of Input Information	Processing of Input Information
	Fraction of EU tonnage used in region:[A1]: 0.053 Fraction of Regional tonnage used locally: [A3] 0.00075	Price OR, Hughes, GO, Roche, NL, Mason, PJ, 2010, IEAM. Fox KK, Cassani G, Facchi A, Schroder FR, Poelloth C, Holt MS. 2002, Chemosphere 47:499–505.	Marketing surveys in combination with geostatistical analysis of population densities in Europe. Analysis of boron as conservative tracer of detergent consumption.
Days emitting	Dispersive use [FD3] Continuous release (365 d/a) [FD4]	Default settings in the REACH Guidance	None

Release factors		Values (per pathway)			
		To air	To water	To soil	To waste
	Cosmetics Europe 8a.1.a.v2	0	1	0	0
	Cosmetics Europe 8a.1.b.v2	1	0	0	0
	Cosmetics Europe 8a.1.c.v2	0	1	0	0
		Justification			

Cosmetics Europe SPERC 8a.1.a.v2: Rinse-off products such as shampoo and soap products that are disposed of with the waste water such that 100% of the product ingredients enter the waste water system. Product residues remaining on the substrate are likely to be washed off in the next washing event.

Cosmetics Europe SPERC 8a.1.b.v2: Propellants used in personal care spray products (and other "leave-on" products that are not washed off immediately) evaporate completely into the air.

Cosmetics Europe SPERC 8a.1.c.v2: Nonvolatile constituents personal care spray products (and other "leave-on" products that are not washed off immediately) will deposit on the skin surface and will be transferred to the waste water system in the next washing event.

Optional risk management measures	
	Not required

Narrative description	
	The quantitative risk characterisation for this environmental exposure has been calculated using name of calculation model uses. The environmental exposure calculation per compartment is based on name of algorithms

	used (i.e. the algorithms of the EU TGD 2003 Risk Assessment Spreadsheet Model 1.24a)		
Scaling	Not applicable for wide dispersive uses.		

Background information

Applicable ERC	8a – Wide dispersive indoor use of processing aids, open; 8d – Wide dispersive outdoor use of processing aids, open		
Responsible	A.I.S.E.		
Version	v2		
Environmental Parameters for Fate Calculation	Local freshwater dilution factor: 10 Local marine water dilution factor: 100 Receiving surface water flow is 18000 m³/d.	Default settings of the REACH Guidance.	None
Safe Use			

Safe Use – Communication in SDS

The REACH registrant establishes a set of standard conditions of safe use for a substance for wide dispersive use of cleaning and maintenance products by adopting the conditions specified in this SPERC. This information is documented in the Chemical Safety Report and communicated in the Safety Data Sheet.

AISE justification:

Price et al (2010)[1] presented a novel approach that allows the coupling of population density and country-specific usage statistics for a range of home and personal care products. Spatially explicit usage estimates were generated for European Union (EU) hypothetical regions (200 × 200-km grid), as described in EU risk assessment frameworks. Recent sales and population density data were combined to assess the relevance of current default assumptions; that 10% of a product will be used in an EU hypothetical region that is inhabited by 20 million people. Three personal care product categories were included in the assessment (hair, oral body and deodorant products) and usage values in a 200 × 200 km region containing 20 million people ($F_{prodregion}$), as a proportion of total EU27 product usage were derived (see Table 1). In order to provide a generic refinement to ERC2 for chemicals used in personal care products it is proposed to use a weighted average for all personal care products used in the analysis conducted by Price et al (2010)[1]. The average per capita consumption (PCC) for each product type in the EU27 is also provided in Table 1 and the weighted average $F_{prodregion}$ was calculated to be 0.053.

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[1] Price OR, Hughes GO, Mason PJ and Roche NL. 2010. Improving emission estimates of ingredients used in home and personal care products for use in EU risk assessments. *Integr Environ Assess Manag. 2010 Oct;6 (4):677-84.*

Appendix - Determinant Lists

Determinant sets of Cosmetics Europe SPERCs for wide dispersive uses

Cosmetics Europe 8a.1.a.v2: Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals)

Determinant Label	Quali-/ Quanti -tative	Value	Description of Value	Standard Phrase	Efficiency -if applicable
Type of Process		Substance applied in aqueous process solution with negligible volatilization		Product applied in aqueous process solution with negligible volatilization.	
Amount use locally (Estimation of daily wide dispersive use)	Qual	Overwrite default value of 'daily wide dispersive use' with refined value. Obtain refined value by dividing the default value by 5. This refinement factor is based on refined consumption pattern information for cosmetic and personal care products. Fraction of EU tonnage used in region (FRegion) = 0.053 Fraction of Regional tonnage used locally (FMainLocalSource) = 0.00075. Amount used locally MUse, Local is estimated according to MUse, Local = MUse,EU * FRegion * FMainLocalSource * 1/365.		Overwrite default value of 'daily wide dispersive use' with refined value. Obtain refined value by dividing the default value by 5. This refinement factor is based on refined consumption pattern information for cosmetic and personal care products. Fraction of EU tonnage used in region (FRegion) = 0.053 Fraction of Regional tonnage used locally (FMainLocalSource) = 0.00075. Amount used locally MUse, Local is estimated according to MUse, Local = MUse,EU * FRegion * FMainLocalSource * 1/365.	

Indoor/outdoor use   Qual   Indoor Use   Indoor

Cosmetics Europe 8a.1.b.v2 Wide Dispersive Use in Aerosol products for hair and skin care (Propellants)

Determinant Label	Quali-/ Quanti -tative	Value	Description of Value	Standard Phrase	Efficiency -if applicable
Type of Process	Qual	Spray application with complete evaporation of volatiles		Spray application with complete evaporation of volatiles	
Amount use locally (Estimation of daily wide dispersive use)	Qual	Overwrite default value of 'daily wide dispersive use' with refined value. Obtain refined value by dividing the default value by 5. This refinement factor is based on refined consumption pattern information for cosmetic and personal care products. Fraction of EU tonnage used in region (FRegion) = 0.053 Fraction of Regional tonnage used locally (FMainLocalSource) = 0.00075. Amount used locally MUse, Local is estimated according to MUse, Local = MUse,EU * FRegion * FMainLocalSource * 1/365.		Overwrite default value of 'daily wide dispersive use' with refined value. Obtain refined value by dividing the default value by 5. This refinement factor is based on refined consumption pattern information for cosmetic and personal care products. Fraction of EU tonnage used in region (FRegion) = 0.053 Fraction of Regional tonnage used locally (FMainLocalSource) = 0.00075. Amount used locally MUse, Local is estimated according to MUse, Local = MUse,EU * FRegion * FMainLocalSource * 1/365.	
Indoor/outdoor use	Qual	Indoor Use		Indoor	

Cosmetics Europe 8a.1.c.v2 Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants)

Determinant Label	Quali-/ Quanti -tative	Value	Description of Value	Standard Phrase	Efficiency -if applicable
Type of Process	Qual	Spraying of involatile solids, which finally are disposed off via wastewater.		Spraying of involatile solids, which finally are disposed off via wastewater.	
Amount use locally (Estimation of daily wide dispersive use)	Qual	Overwrite default value of 'daily wide dispersive use' with refined value. Obtain refined value by dividing the default value by 5. This refinement factor is based on refined consumption pattern information for cosmetic and personal care products. Fraction of EU tonnage used in region (FRegion) = 0.053 Fraction of Regional tonnage used locally (FMainLocalSource) = 0.00075. Amount used locally MUse, Local is estimated according to MUse, Local = MUse,EU * FRegion * FMainLocalSource * 1/365.		Overwrite default value of 'daily wide dispersive use' with refined value. Obtain refined value by dividing the default value by 5. This refinement factor is based on refined consumption pattern information for cosmetic and personal care products. Fraction of EU tonnage used in region (FRegion) = 0.053 Fraction of Regional tonnage used locally (FMainLocalSource) = 0.00075. Amount used locally MUse, Local is estimated according to MUse, Local = MUse,EU * FRegion * FMainLocalSource * 1/365.	
Indoor/outdoor use	Qual	Indoor Use		Indoor	