

FS Section	Content field	Explanation of content
1. Title	1.1 Title of SPERC	Industrial application of coatings by spraying
	1.2 SPERC codes:	CEPE SPERC 4.1a.v2 Application - industrial - spraying - indoor use - incineration - volatiles CEPE SPERC 4.1b.v2 Application - industrial - spraying - indoor use - volatiles CEPE SPERC 5.1a.v2 Application - industrial - spraying - indoor use – non-volatiles CEPE SPERC 5.2a.v2 Application - industrial - spraying - indoor use - powder
2. Scope	2.1 Substance/Product Domain	
	Substance types / functions / properties included or excluded:	Volatile and non-volatile compounds in liquid mixtures, solids in polymeric liquids Non-volatile compounds in solid Intended compounds not classified as carcinogenic or mutagenic, PBT or vPvB Volatile compounds rapidly degradable Water-borne mixtures may contain biocidal agents of product type 2, 6 or 7
	Additional specification of product types covered:	Liquid spray coatings: - solvent-borne up to 95 % volatile content, - water-borne coatings, - liquid solvent-free coatings close to 100 % non-volatile content Powder coatings 100% non-volatile
	Inclusion of sub-SPERCs: y/n	Yes
	2.2 Process domain	
	Description of activities/processes:	Covers the whole process* of application of organic solvent borne, water borne liquid and powder coatings by industrial users by spraying. *Includes: - Application of coatings by spray - Cleaning of equipment Waste management of coatings
	2.3 List of applicable UDs	
	LCS:	IS (Use at industrial sites)
SU:	Various (SU 7, 11, 12, 15, 16, 17, 18, 19)	
PC:	9a, 18	
3. Operational conditions (including information on technical strategies to achieve high raw material efficiency)	3.1 Conditions of use	
	Location of use:	Indoor
	Water contact during use: y/n	Y
	Connected to a standard municipal biological STP: y/n	N
	Rigorously contained system with minimisation of release to the environment: y/n	N
	Further operational conditions impacting on releases to the environment.	
3.2 Waste Handling and Disposal		

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	Waste Handling and Disposal:	Process waste may be recycled or incinerated by waste disposal company	
4. Obligatory RMMs onsite	RMM limiting release to air:	CEPE4.1a, 4.1b, 5.1a Smaller users (see IED) – none Larger users (see IED)– abatement or use of solvent management plan	CEPE 5.2a Filter and cyclone
	RMM Efficiency (air): numerical value	Not applicable	
	Reference for RMM Efficiency (air):		
	RMM limiting release to water:	Not applicable	
	RMM Efficiency (water): numerical value	Not applicable	
	Reference for RMM Efficiency (water):	Not applicable	
	RMM limiting release to soil:	Not applicable	
	RMM Efficiency (soil): numerical value	Not applicable	
5. Exposure Assessment Input	Reference for RMM Efficiency (soil):	Not applicable	
	5.1 Substance use rate		
	Amount of substance use per day: numerical value	Typical maximum daily usage, for any one substance , based on sector knowledge 1000 kg product/day at any one location	
		Substance function	Max daily substance use rate in kg/d
		Pigment/extender/filler	100.0
		Binder	100.0
		Water	350.0
		Organic solvent/coalescent	450.0
		Additives	5.0
	Fraction of EU tonnage used in region: numerical value	Not relevant as spERC is not meant for widespread use	
	Fraction of Regional tonnage used locally: numerical value	Not relevant as spERC is not meant for widespread use	
	Justification / information source:	Based on sector knowledge	
	5.2 Days emitting		
	Number of emission days per year: numerical value	Continuous release: 225 d/y	
	Justification / information source:	Typical industry situation (5 working days a week, shut down for vacation, no need for continuous shift)	
5.3 Release factors			
SPERC identifier:	CEPE SPERC 4.1a.v2		
ERC:	4		
sub-SPERC applicability:	Application - industrial - spraying - indoor use - incineration - volatiles		
5.3.1 Release Factor – air			
Numeric value / percent of input amount (Air): numerical value	20.8%		
Justification of RFs (Air):	For a coating film to form, the volatile phase of organic solvent borne and water borne coatings must evaporate into the atmosphere. 80% solvent inputs emitted through Incinerator with efficiency 99% No OECD Coatings ESD data – industry data		

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	5.3.2 Release Factor – water	
	Numeric value / percent of input amount (Water): numerical value	0
	Justification of RFs (Water):	A proportion of the liquid phase will be present in spray booth scrubber water.
	5.3.3 Release Factor – soil	
	Numeric value / percent of input amount (Soil): numerical value	0
	Justification of RFs (Soil):	There is no deposition to soil from indoor application processes. OECD ESD
	5.3.4 Release Factor – waste	
	Percent of input amount disposed as waste: numerical range	5 %
	Justification of RFs:	Published literature: Best available techniques reference document (BREF) on Surface treatment using solvents (STS), 2007 Qualitative arguments: Model assumptions explained in background document Industry data: Available data from reference plants as described in background document
	SPERC identifier:	CEPE SPERC 4.1b.v2
	ERC:	4
	sub-SPERC applicability:	Application - industrial - spraying - indoor use - volatiles
	5.3.1 Release Factor – air	
	Numeric value / percent of input amount (Air): numerical value	95%
	Justification of RFs (Air):	For a coating film to form, the volatile phase of organic solvent borne and water borne coatings must evaporate into the atmosphere. OECD Coatings ESD
	5.3.2 Release Factor – water	
	Numeric value / percent of input amount (Water): numerical value	0
	Justification of RFs (Water):	A proportion of the liquid phase will be present in spray booth scrubber water.
	5.3.3 Release Factor – soil	
	Numeric value / percent of input amount (Soil): numerical value	0
	Justification of RFs (Soil):	There is no deposition to soil from indoor application processes. OECD ESD
	5.3.4 Release Factor – waste	
	Percent of input amount disposed as waste: numerical range	5 %
	Justification of RFs:	Published literature: Best available techniques reference document (BREF) on Surface treatment using solvents (STS), 2007 Qualitative arguments: Model assumptions explained in background document Industry data: Available data from reference plants as described in background document

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FS Section	Content field	Explanation of content
	SPERC identifier:	CEPE SPERC 5.1a.v2
	ERC:	5
	sub-SPERC applicability:	Application - industrial - spraying - indoor use – non volatiles
	5.3.1 Release Factor – air	
	Numeric value / percent of input amount (Air): numerical value	1.5%
	Justification of RFs (Air):	A proportion of the solid phase will be contained in overspray. OECD ESD
	5.3.2 Release Factor – water	
	Numeric value / percent of input amount (Water): numerical value	0%
	Justification of RFs (Water):	There is no emission to water during application and drying
	5.3.3 Release Factor – soil	
	Numeric value / percent of input amount (Soil): numerical value	0
	Justification of RFs (Soil):	There is no deposition to soil from indoor application processes. OECD ESD
	5.3.4 Release Factor – waste	
	Percent of input amount disposed as waste: numerical range	10 – 52 %, depending on achieved transfer efficiency of spraying (between 30 and 90 %)
	Justification of RFs:	Published literature: Best available techniques reference document (BREF) on Surface treatment using solvents (STS), 2007 Qualitative arguments: Model assumptions explained in background document Industry data: Available data from reference plants as described in background document
	SPERC identifier:	CEPE SPERC 5.2a.v2
	ERC:	5
	sub-SPERC applicability:	Application - industrial - spraying - indoor use - powder
	5.3.1 Release Factor – air	
	Numeric value / percent of input amount (Air): numerical value	2%
	Justification of RFs (Air):	A proportion of the solid phase will be contained in overspray. OECD ESD
	5.3.2 Release Factor – water	
	Numeric value / percent of input amount (Water): numerical value	1%
	Justification of RFs (Water):	There is no emission to water during application and drying. Possible emissions from cleaning processes
	5.3.3 Release Factor – soil	
	Numeric value / percent of input amount (Soil): numerical value	0
	Justification of RFs (Soil):	There is no deposition to soil from indoor application processes. OECD ESD

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FS Section	Content field	Explanation of content
	5.3.4 Release Factor – waste	
	Percent of input amount disposed as waste: numerical range	3-30%
	Justification of RFs:	Published literature: Best available techniques reference document (BREF) on Surface treatment using solvents (STS), 2007, Ch. 6.4.3.2