

FS Section	Content field	Explanation of content
1. Title	1.1 Title of SPERC	Formulation of organic solvent and water borne liquid coatings and inks <u>Use only when CEPE SPERC 2.1a - c or CEPE SPERC 2.2a – 2.2c cannot be used in preference</u>
	1.2 SPERC codes:	CEPE SPERC 2.4a.v2 Formulation of organic solvent and water borne coatings and inks (where specific formulation not known) - large scale (>1,000 tpa solvent use) – volatiles CEPE SPERC 2.4b.v2 Formulation of organic solvent and water borne coatings and inks (where specific formulation not known) - small scale (<1,000 tpa solvent use) – volatiles CEPE SPERC 2.4c.v2 Formulation of organic solvent and water borne coatings and inks (where specific formulation not known) – non-volatiles
2. Scope	2.1 Substance/Product Domain	
	Substance types / functions / properties included or excluded:	Includes: Volatile organic compounds Particulates Volatile and non-volatile compounds in liquid mixtures, solids in polymeric liquids Non-volatile compounds in solid Intended compounds not classified as PBT or vPvB Volatile compounds rapidly degradable
	Additional specification of product types covered:	Organic solvent borne coatings and inks: - solvent-borne up to 95 % volatile content, - liquid solvent-free coatings close to 100 % non-volatile content Water borne coatings and inks: - may contain solvent up to 25 % volatile content.
	Inclusion of sub-SPERCs: y/n	Yes
	2.2 Process domain	
	Description of activities/processes:	Covers the whole process of formulation/manufacture of organic solvent and water borne liquid coatings and inks.
	2.3 List of applicable UD	
	LCS:	F (Formulation or re-packing)
	SU:	n/a
PC:	9a, 9b, 9c, 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	Y
	Rigorously contained system with minimisation of release to the environment: y/n	N
	Further operational conditions impacting on releases to the environment.	Process efficiency: maximise the efficiency of use of input raw materials through the highest conversion into formulated products
	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:	Installation controlled under IED– abatement or use of solvent management plan	
	RMM Efficiency (air): numerical value	0.95 – 0.97	
	Reference for RMM Efficiency (air):	Total emission limits from the Industrial Emissions Directive – IED - (2010/75/EU) [http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1501849273822&uri=CELEX:32010L0075 and corrigendum] Individual organic solvents CEPE expert decision based on EMISSION SCENARIO DOCUMENT ON COATINGS INDUSTRY (PAINTS, LACQUERS AND VARNISHES), OECD, July 2009 [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/JM/MONO(2009)24&doclanguage=en]	
	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	
	Reference for RMM Efficiency (soil):	Not applicable	
5. Exposure Assessment Input	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 150 000 kg product/day at any one location <i>Note: in many coatings and inks manufacturing facilities, usage rates will be substantially below the figures shown</i>	
		Substance function	Daily substance use rate in kg/d
		Pigment/extender/filler	25 000
		Binder	25 000
		Water	75 000
		Organic solvent/coalescent	100 000
		Additives	1 000
	Fraction of EU tonnage used in region: numerical value	Not relevant as not widespread use	
	Fraction of Regional tonnage used locally: numerical value	Not relevant as not widespread use	
	Justification / information source:		
	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 2.4a.v2		
ERC:	2		
sub-SPERC applicability:	Formulation of organic solvent or water borne coatings and inks - large scale (>1,000 tpa solvent use) – volatiles		
5.3.1 Release Factor – air			
Numeric value / percent of input amount (Air): numerical value	1.8% (total volatiles)		
Justification of RFs (Air):	EMISSION SCENARIO DOCUMENT ON COATINGS INDUSTRY – ESD - (PAINTS, LACQUERS AND VARNISHES), OECD, July 2009		

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Ref: CEPE SpERC 2.4

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		http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/JM/MONO(2009)24&doclanguage=en (tables 4.7 & 5.10)
	5.3.2 Release Factor – water	
	Numeric value / percent of input amount (Water): numerical value	0.25%
	Justification of RFs (Water):	ESD
	5.3.3 Release Factor – soil	
	Numeric value / percent of input amount (Soil): numerical value	0.00
	Justification of RFs (Soil):	ESD
	5.3.4 Release Factor – waste	
	Percent of input amount disposed as waste: numerical range	0.75%
	Justification of RFs:	ESD (tables 4.7 & 5.10)
	SPERC identifier:	CEPE SPERC 2.4b.v2
	ERC:	2
	sub-SPERC applicability:	Formulation of organic solvent or water borne coatings and inks - small scale (<1,000 tpa solvent use) – volatiles
	5.3.1 Release Factor – air	
	Numeric value / percent of input amount (Air): numerical value	3.6% (total volatiles)
	Justification of RFs (Air):	ESD (table 4.4 & 5.13)
	5.3.2 Release Factor – water	
	Numeric value / percent of input amount (Water): numerical value	0.5%
	Justification of RFs (Water):	ESD
	5.3.3 Release Factor – soil	
	Numeric value / percent of input amount (Soil): numerical value	0.00
	Justification of RFs (Soil):	ESD
	5.3.4 Release Factor – waste	
	Percent of input amount disposed as waste: numerical range	1.0%
	Justification of RFs:	ESD (tables 4.4 & 5.13)
	SPERC identifier:	CEPE SPERC 2.4c.v2
	ERC:	2
	sub-SPERC applicability:	Formulation of organic solvent or water borne coatings and inks – non-volatiles
	5.3.1 Release Factor – air	
	Numeric value / percent of input amount (Air): numerical value	0.0097%
	Justification of RFs (Air):	ESD

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	5.3.2 Release Factor – water	
	Numeric value / percent of input amount (Water): numerical value	0.005%
	Justification of RFs (Water):	ESD
	5.3.3 Release Factor – soil	
	Numeric value / percent of input amount (Soil): numerical value	0.00
	Justification of RFs (Soil):	EMISSION SCENARIO DOCUMENT ON COATINGS INDUSTRY (PAINTS, LACQUERS AND VARNISHES), OECD, July 2009 [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/JM/MONO(2009)24&doclanguage=en]
	5.3.4 Release Factor – waste	
	Percent of input amount disposed as waste: numerical range	0.5%
	Justification of RFs:	ESD (tables 4.4 & 5.13)