

FS Section	Content field
1. Title	1.1 Formulation of Solvent-borne and Solvent-less Adhesives / Sealants and Construction Chemical Products – volatile Substances (Large Scale, > 1500 t/a of products)
	1.2 FEICA / EFCC SPERC 2.1b.v3
2. Scope	2.1 Substance/Product Domain
	Substance types / functions / properties included or excluded: Includes volatile substances which evaporate to a significant extent upon curing of the adhesives. Volatiles are defined by a boiling point threshold of $\leq 250^{\circ}\text{C}$.
	Additional specification of product types covered: none
	Inclusion of sub-SPERCs: n
	2.2 Process domain
	Description of activities/processes: storing, mixing, packaging, filling of substances (as part of preparations) and equipment cleaning, maintenance and associated laboratory activities
	2.3 List of applicable Use Descriptors
	LCS: F
	SU: 0
	PC: 1, 9a, 9b
3. Operational conditions	3.1 Conditions of use
	Location of use: indoor
	Water contact during use: n
	Connected to a standard municipal biological STP: y
	Rigorously contained system with minimisation of release to the environment: n
	Further operational conditions impacting on releases to the environment.
	<ul style="list-style-type: none"> Automation in raw materials handling (manual / automatic dosing): High degree of automation in adhesive / sealant formulation
	<ul style="list-style-type: none"> Measures to achieve efficient raw material use (e.g. water re-use, recovery of substances from waste etc.): The manufacture of adhesive chemicals is a multi-stage batch process. The process is arranged to maximise the efficiency of use of input raw materials, through the highest conversion into formulated products.
	<ul style="list-style-type: none"> Conditions preventing emissions to air: use of closed or covered manufacturing equipment to minimise evaporative losses of VOCs. Use of general and manufacturing plant extraction to maintain emissions of airborne VOCs below the levels permitted by 1999/13/EG.
	<ul style="list-style-type: none"> Conditions preventing emissions to water: batch process, no onsite RMM considered as there is no contact/release to water
3.2 Waste Handling and Disposal	
<ul style="list-style-type: none"> Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Vapor recovery (adsorption) or other technique for reducing volatiles emissions (incineration, thermal oxidation) 	
4. Obligatory RMMs onsite	RMM limiting release to air: Waste gas treatment, adsorption, incineration, etc.
	RMM Efficiency (air): 80%
	Reference for RMM Efficiency (air): FEICA / EFCC (2017). Specific Environmental Release Categories (SPERCs) for the formulation of adhesives and sealants and construction chemical products
	RMM limiting release to water: none
	RMM Efficiency (water): n/a
	Reference for RMM Efficiency (water): n/a
	RMM limiting release to soil: none
	RMM Efficiency (soil): n/a
Reference for RMM Efficiency (soil): n/a	
5. Exposure Assessment Input	5.1 Substance use rate
	Amount of substance use per day: The indicative worst case substance use rate (MSPERC) and guidance for refinement can be found in background documentation.
	Fraction of EU tonnage used in region: n/a
	Fraction of Regional tonnage used locally: n/a
	Justification / information source: FEICA / EFCC (2017). Specific Environmental Release Categories (SPERCs) for the formulation of adhesives and sealants and construction chemical products

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	5.2 Days emitting
	Number of emission days per year: 300
	Justification / information source: FEICA / EFCC (2017). Specific Environmental Release Categories (SPERCs) for the formulation of adhesives and sealants and construction chemical products
	5.3 Release factors
	sub-SPERC identifier: n/a
	ERC: 2
	sub-SPERC applicability: n/a
	5.3.1 Release Factor – air
	Numeric value / percent of input amount (Air): 0.36%
	Justification of RFs (Air): Tolls et al. 2016. Estimating emissions from adhesives/sealants uses and manufacturing for use in environmental risk assessment. Intergr Environ Assess Manag, (Jan, 2016)
	5.3.2 Release Factor – water
	Numeric value / percent of input amount (Water): 0%
	Justification of RFs (Water): Tolls et al. 2016. Estimating emissions from adhesives/sealants uses and manufacturing for use in environmental risk assessment. Intergr Environ Assess Manag, (Jan, 2016)
	5.3.3 Release Factor – soil
	Numeric value / percent of input amount (Soil): 0%
	Justification of RFs (Soil): Tolls et al. 2016. Estimating emissions from adhesives/sealants uses and manufacturing for use in environmental risk assessment. Intergr Environ Assess Manag, (Jan, 2016)
	5.3.4 Release Factor – waste
	Percent of input amount disposed as waste: 0.2 -3%
	Justification of RFs: OECD 2009, OECD Environment, Health and Safety Publications Series on Emission Scenario Documents No. 20, EMISSION SCENARIO DOCUMENT ON ADHESIVE FORMULATION, Paris 2009.
References to SPERC Background Document ¹	
	FEICA / EFCC (2017), Specific Environmental Release Categories (SPERCs) for the formulation of adhesives and sealants and construction chemical products

¹ The objective of this factsheet is to summarize the SPERC key facts provided in the corresponding SPERC background documents. It gives an overview of the SPERC essentials for the chemical safety assessment. A SPERC background document is a reference document, which provides the description of the emission situation(s) for a use specified by an industrial sector, the justification and applicability domain of the environmental release factors, and the references/information sources/methods used in the derivation of the release factors.