

| FS Section | Content field |
|---|---|
| 1. Title | 1.1 Industrial use of Volatiles in Water-borne Adhesives / Sealants |
| | 1.2 FEICA SPERC 4.1.c.v4 |
| 2. Scope | 2.1 Substance/Product Domain |
| | Substance types / functions / properties included or excluded: Includes volatile substances in water borne-adhesives. Volatile ingredients are defined by a boiling point threshold of $\leq 250^{\circ}\text{C}$. |
| | Additional specification of product types covered: products applied in roll coating and curtain-coating, dip-coating, syringe-, bead-application and spraying. |
| | Inclusion of sub-SPERCs: n |
| | 2.2 Process domain |
| | Description of activities/processes: Charging equipment, application of adhesive / sealant, curing, equipment cleaning, maintenance |
| | 2.3 List of applicable Use Descriptors |
| | LCS: IS |
| | SU: 0 |
| PC: 1, 9a, 9b | |
| 3. Operational conditions | 3.1 Conditions of use |
| | Location of use: Indoor |
| | Water contact during use: y |
| | 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 application. Equipment cleaning: with water, additional wastewater emission controls are not applicable as releases to wastewater are small. Measures to achieve efficient use of chemicals: Targeted application of adhesive / sealant to substrate. Upon curing, substances are included into matrix without intended release to the environment. Solvents evaporate to a significant extent upon curing of the adhesives. |
| | 3.2 Waste Handling and Disposal |
| | Qualitative information on which types of waste occur from equipment cleaning, processing and RMM and how they are handled/disposed of: Equipment cleaned with water, washing disposed of with wastewater. Low amount of solid waste (mats used for scavenging overspray) is disposed as external waste (no wet-scrubbing). |
| 4. Obligatory RMMs onsite | RMM limiting release to air: none |
| | RMM Efficiency (air): n/a |
| | Reference for RMM Efficiency (air): n/a |
| | 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 rates (M_{SPERC}) of several ingredient types 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 expert assessment |

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| 5.2 Days emitting |
| Number of emission days per year: 300 |
| Justification / information source: FEICA expert assessment |
| 5.3 Release factors |
| sub-SPERC identifier: n/a |
| ERC: 4 |
| sub-SPERC applicability: n/a |
| 5.3.1 Release Factor – air |
| Numeric value / percent of input amount (Air): 98.5% |
| 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): 0.3% |
| 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: 0-6% |
| Justification of RFs: OECD 2009, OECD Environment, Health and Safety Publications Series on Emission Scenario Documents No. 22, EMISSION SCENARIO DOCUMENTS ON COATING INDUSTRY (Paints, Laquers and Varnishes), Paris 2009 |
| References to SPERC Background Document ¹ |
| FEICA, 2023, Specific Environmental Release Categories (SPERCs) for the industrial use of adhesives and sealants |

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.