

Section	Content																			
SPERC Title	Industrial Use of Substances in Adhesives																			
SPERC code																				
	<p>FEICA SPERC 4.2a.v2 - Industrial Use of Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives</p> <p>FEICA SPERC 4.2b.v2 - Industrial Use of Solvents in Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction Adhesives</p> <p>FEICA SPERC 5.1a.v2 - Industrial Use of Substances other than Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives</p> <p>FEICA SPERC 5.1b.v2 - Industrial Use of Substances other than Solvents in Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction Adhesives</p> <p>FEICA SPERC 5.1c.v2 - Industrial Use of Substances other than Solvents in water borne adhesives</p>																			
Scope																				
	<p>Covers the application of adhesives for a wide range of purposes by industrial uses. Covers different adhesives application techniques for indoor use.</p> <p>Substance Domain:</p> <p>FEICA SPERC 4.2a.v2, FEICA SPERC 4.2b.v2 Solvents which evaporate to a significant extent upon curing of the adhesives.</p> <p>FEICA SPERC 5.1a.v2, FEICA SPERC 5.1b.v2, FEICA SPERC 5.1c.v2 All substances which do not evaporate to a significant extent upon curing of the adhesives.</p>																			
Related use descriptors																				
	<p>Main User Group: SU 3</p> <p>Sector of Use: SU 19</p> <p>Environmental Release Class: ERC 4, ERC 5</p> <p>Process Categories: PROC 2, PROC 3, PROC 4, PROC 5, PROC 7, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 11, PROC 12, PROC 13, PROC 14</p> <p>Product categories: PC 1, PC 9a, PC 9b, PC10</p>																			
Operational conditions	Operational conditions – Phrases																			
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Obligatory onsite RMMs	RMM – Phrase			RMM-Efficiency (RE _{SPERC})	
	<i>air</i>				
	FEICA 4.2a.v2	No onsite RMM considered		0	
	FEICA 4.2b.v2			0	
	FEICA 5.1a.v2	No onsite RMM considered as there is a very small release to air		0	
	FEICA 5.1b.v2			0	
	FEICA 5.1c.v2			0	
	<i>Water</i>				
	FEICA 4.2a.v2	No onsite RMM considered as there is no waste water production during the processes		0	
	FEICA 4.2b.v2			0	
	FEICA 5.1a.v2	No onsite RMM considered as there is no waste water production during the processes		0	
	FEICA 5.1b.v2			0	
	FEICA 5.1c.v2	No onsite RMM considered as there is a very small release to water		0	
Substance use rate	Phrase			Value	
	FEICA 4.2a.v2	The substance maximum use rate in a typical operation (M _{SPERC} in kg/d)		600	
	FEICA 4.2b.v2			1900	
	FEICA 5.1a.v2			100	
	FEICA 5.1b.v2			800	
	FEICA 5.1c.v2			100	
	Justification				
	Typical maximum site tonnage, based on sector knowledge				
Days emitting	Phrase			Value	
	FEICA 4.2a.v2	Emission days (days/year)		220	
	FEICA 4.2b.v2			220	
	FEICA 5.1a.v2			220	
	FEICA 5.1b.v2			220	
	FEICA 5.1c.v2			220	
Release factors	Values (per pathway)				
		To air	To water	To soil	To waste
	FEICA 4.2a.v2	0.985	0	0	0
	FEICA 4.2b.v2	0.985	0	0	0
	FEICA 5.1a.v2	0.017	0	0	0
	FEICA 5.1b.v2	0.017	0	0	0
	FEICA 5.1c.v2	0	0.003	0	0

	Justification		
	<p>Regarding environmental emissions, the industrial use of adhesives and sealants is very similar to related industrial uses of paints, lacquers and varnishes. For that reason, release fractions defined in the OECD Emission Scenario Document have been adopted for the SPERC Factsheet for the industrial uses of adhesives and sealants. This holds true for FEICA 4.2a.v2, FEICA 4.2b.v2, FEICA 5.1a.v2, FEICA 5.1b.v2.</p> <p>For FEICA 5.1c.v2 (i.e. for non-volatiles in water-borne adhesives) the release fractions defined in the OECD Emission Scenario Document for water borne decorative paints in professional and general public use were adapted. Adaptation was done by accounting for the higher degree of efficiency of material use in industrial settings.</p> <p>The OECD Emission Scenario Document specifies two release factors to water, 0 for professional users, 0.015 (i.e. 1.5%) for the general public. For the approximation, an amalgamated value of 0.9% was used. This value was divided by three to obtain a release factor of 0.003 (0.3%) for the emissions to water from industrial use. The corresponding release factor to air is set to 0 following the OECD Emission Scenario Document.</p> <p>OECD Emission Scenario Document, Series No. 22 Coating Industry (Paints, Lacquers and Varnishes), July 2009.</p>		
Optional risk management measures	Type of RMM		Efficiency
	FEICA 4.2a.v2	Treat air emission to provide a typical removal efficiency of (%)	80
	FEICA 4.2b.v2		80
	FEICA 5.1a.v2	Air emission are not applicable as there is a very small release to air	N/A
	FEICA 5.1b.v2		N/A
	FEICA 4.2a.v2	Wastewater emission controls are not applicable as there is no direct release to wastewater	N/A
	FEICA 4.2b.v2		N/A
	FEICA 5.1a.v2		N/A
	FEICA 5.1b.v2		N/A
	FEICA 5.1c.v2	Wastewater emission controls are not applicable as releases to wastewater are small	N/A
Narrative description	Industrial Use of Substances in Adhesives		
	<p>Industrial applications of Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile and others adhesives Adhesives used in the above mentioned products; others include products like electricity, electronics, optics, hygienics, food, toys medical technics, sportswear etc. are normally rolled, sprayed or directly used from the cartridge due to the application purposes.</p> <p>Industrial applications of Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile and others adhesives Adhesives used in the above mentioned products; others include products like electricity, electronics, optics, hygienics, food, toys medical technics, sportswear etc. are normally rolled, sprayed or directly used from the cartridge due to the application purposes</p> <p>Industrial applications of Paper, Board and related Products / Woodworking and</p>		

	<p>joinery / Footwear and Leather, Textile and others adhesives Adhesives used in the above mentioned products; others include products like electricity, electronics, optics, hygienics, food, toys medical technics, sportswear etc. are normally rolled, sprayed or directly used from the cartridge due to the application purposes.</p> <p>Industrial applications of Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction/Adhesives adhesives Adhesives used in the above mentioned products; are normally brushed, rolled, sprayed or directly used from the cartridge due to the application purposes.</p>
Scaling	
	<p>Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.</p>

Appendix - Determinant Lists**FEICA SPERC 4.2a.v2 Industrial Use of Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives**

Determinant Label	Quali-/ Quantitative	Value	Description of Value	Standard Phrase	Efficiency -if applicable
Type of Process	Qual	Solvent based process		Solvent based process	
Indoor/outdoor use	Qual	Covers Indoor and Outdoor Use		Covers Indoor and Outdoor Use	
Equipment cleaning	Qual	Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.		Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Process efficiency	Qual	Process with efficient use of raw materials.	Typically implemented measures for reducing emissions to waste water may include: - Closed batch systems	Process with efficient use of raw materials.	

FEICA SPERC 4.2b.v2 Industrial Use of Solvents in Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction Adhesives

Determinant Label	Quali-/ Quantitative	Value	Description of Value	Standard Phrase	Efficiency -if applicable
Type of Process	Qual	Solvent based process		Solvent-based process.	
Indoor/outdoor use	Qual	Covers Indoor and Outdoor Use		Covers Indoor and Outdoor Use	
Equipment cleaning	Qual	Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.		Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Process efficiency	Qual	Process with efficient use of raw materials.	Typically implemented measures for reducing emissions to waste water may include: - Closed batch systems	Process with efficient use of raw materials.	

FEICA SPERC 5.1a.v2 Industrial Use of Substances other than Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives

Determinant Label	Quali-/ Quantitative	Value	Description of Value	Standard Phrase	Efficiency -if applicable
Type of Process		Dry process (no water used in process)		Dry process (no water used in process)	
Indoor/outdoor use	Qual	Covers Indoor and Outdoor Use		Covers Indoor and Outdoor Use	
Equipment cleaning	Qual	Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.		Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Process efficiency		Process with efficient use of raw materials.	Typically implemented measures for reducing emissions to waste water may include: - Closed batch systems	Process with efficient use of raw materials.	

FEICA SPERC 5.1b.v2 Industrial Use of Substances other than Solvents in Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction Adhesives

Determinant Label	Quali-/Quantitative	Value	Description of Value	Standard Phrase	Efficiency -if applicable
Type of Process		Dry process (no water used in process)		Dry process (no water used in process)	
Indoor/outdoor use	Qual	Covers Indoor and Outdoor Use		Covers Indoor and Outdoor Use	
Equipment cleaning	Qual	Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.		Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste.	
Process efficiency		Process with efficient use of raw materials.	Typically implemented measures for reducing emissions to waste water may include: - Closed batch systems	Process with efficient use of raw materials.	

FEICA SPERC 5.1c.v2 Industrial Use of Substances other than Solvents in water borne adhesives

Determinant Label	Quali-/ Quantitative	Value	Description of Value	Standard Phrase	Efficiency -if applicable
Type of Process	Qual	Substance applied in aqueous process solution with negligible volatilization		Product applied in aqueous process solution with negligible volatilization.	
Indoor/outdoor use	Qual	Covers Indoor and Outdoor Use		Covers Indoor and Outdoor Use	
Equipment cleaning	Qual	Equipment cleaned with water, washing disposed of with wastewater		Equipment cleaned with water, washing disposed of with wastewater	
Process efficiency	Qual	Process with efficient use of raw materials.	Typically implemented measures for reducing emissions to waste water may include: - Closed batch systems	Process with efficient use of raw materials.	