

- FS Section	Content field	Explanation of content	CSR	eSDS
1. Title	1.1 Title of SPERC	Cleaning agents (professional): solvent-borne	Y	Y
	1.2 SPERC code	ESVOC SPERC 8.4b.v3	Y	Y
2. Scope	2.1 Substance/Product Domain			
	Substance types / functions / properties included or excluded	Applicable to petroleum substances and petrochemicals.	Y	N
	Additional specification of product types covered:	Includes a variety of aliphatic and aromatic hydrocarbons, ketones, alcohols, acetates, glycols, glycol ethers, and glycol ether acetates.	Y	N
	Inclusion of sub-SPERCs	No	N	N
	2.2 Process domain			
	Description of activities/processes:	Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products.	Y	Y
	2.3 List of applicable Use Descriptors			
	LCS	PW – Widespread use by professional workers	Y	Y
	SU	SU0 - Other	Y	Y
PC	PC35 – Washing and cleaning products	Y	Y	
3. Operational conditions	3.1 Conditions of use			
	Location of use	Indoor/Outdoor	Y	Y
	Water contact during use	Yes	Y	Y
	Connected to a standard municipal biological STP	Yes	Y	Y
	Rigorously contained system with minimisation of release to the environment	No	Y	N
	Further operational conditions impacting on releases to the environment	Volatile compounds prone to atmospheric release. Wastewater emissions generated from equipment cleaning with water.	Y	Y
	3.2 Waste Handling and Disposal			
	Waste Handling and Disposal:	Unused and spent products and solutions should be appropriately labelled and stored for eventual recovery or disposal as hazardous waste. A suitable unbreakable and closable container should be used when storing and shipping hazardous materials. The containers must be solvent compatible, leakproof, and free of any defects. Contaminated debris such as disposable paper towels, brushes, rollers, masks, transfer vessels, and wipes that may contain small amounts of solvent residue need to be handled as hazardous waste and properly disposed of in a manner that is consistent with local, regional, and national regulations. Direct disposal of waste into a municipal sewer system needs to conform with all applicable laws and regulations. A spill plan needs to be available that outlines the steps to be taken to minimize any potential health and environmental threats. EPA (2001). Managing Your Hazardous Waste: A Guide for Small Businesses. U.S. Environmental Protection Agency, Office of Solid Waste	Y	N

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		and Emergency Response. Washington, DC. https://www.epa.gov/sites/production/files/2014-12/documents/k01005.pdf .		
4. Obligatory RMMs onsite	RMM limiting release to air:	No obligatory RMMs.	Y	Y
	RMM Efficiency (air):	Emissions to air are minimized when the product is used in accordance with the manufacturers' instructions and established practices.	Y	Y
	Reference for RMM Efficiency (air):	AEA, 2025. Recommendations for De-icing/Anti-icing Aeroplanes on the Ground. Association of European Airlines. Brussels, Belgium. https://skybrary.aero/bookshelf/books/2869.pdf .	Y	N
	RMM limiting release to water:	By default, the release to water is modified after biological treatment at a standard municipal sewage treatment plant (STP) with an effluent flow rate of 2,000 m ³ /day. The effluent discharge rate is applicable to a group of 10,000 inhabitants who generate 200 L of wastewater per person.	Y	Y
	RMM Efficiency (water):	The removal efficiency is provided by the SimpleTreat model, which takes into consideration the biodegradability, partitioning behaviour, and volatility of an organic substance. Degradation assumes the operation of an aerobic activated-sludge reactor under steady-state conditions.	Y	Y
	Reference for RMM Efficiency (water):	ECHA (2016). <i>Guidance on Information Requirements and Chemical Safety Assessment. Chapter R.16: Environmental Exposure Assessment</i> Version 3.0. European Chemicals Agency. Helsinki, Finland. https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf	Y	N
	RMM limiting release to soil:	No obligatory RMMs.	Y	Y
	RMM Efficiency (soil):	Emissions to soil are minimized when the product is used in accordance with the manufacturers' instructions and/or the established practices.	Y	Y
	Reference for RMM Efficiency (soil):	AEA, 2025. Recommendations for De-icing/Anti-icing Aeroplanes on the Ground. Association of European Airlines. Brussels, Belgium. https://skybrary.aero/bookshelf/books/2869.pdf .	Y	N
5. Exposure Assessment Input	5.1 Substance use rate			
	Amount of substance use per day:	Supplied by registrant	Y	Y
	Fraction of EU tonnage used in region:	10% (default value)	Y	N
	Fraction of Regional tonnage used locally:	0.05% (default value)	Y	N
	Justification / information source:	ECHA (2016). <i>Guidance on Information Requirements and Chemical Safety Assessment. Chapter R.16: Environmental Exposure Assessment</i> Version 3.0. European Chemicals Agency. Helsinki, Finland. https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf	Y	N
	5.2 Days emitting			
	Number of emission days per year:	365 (default value)	Y	Y
	Justification / information source:	ECHA, 2016. <i>Guidance on Information Requirements and Chemical Safety Assessment. Chapter R.16: Environmental Exposure Assessment</i> Version 3.0. European Chemicals Agency. Helsinki, Finland. https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf	Y	N
	5.3 Release factors			
	sub-SPERC identifier:	ESVOC 8.4b.v3	Y	N
ERC	ERC 8a ERC 8d			
sub-SPERC applicability:	None	Y	N	

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5.3.1 Release Factor – air				
	Numeric value / percent of input amount (Air)	4%	Y	Y
	Justification of RFs (Air):	The value represents an air emission limit value for dry-cleaning solvent use in Europe (EU, 1999). The stated value of 20 grams of solvent per kilogram of garments cleaned was applied as an air release factor that was representative of a broad array of professional cleaning products. NIOSH (1997). Control of Health and Safety Hazards in Commercial Drycleaners: Chemical Exposures, Fire Hazards, and Ergonomic Risk Factors. Publication No. 97-150, U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health. Washington, DC. https://www.cdc.gov/niosh/docs/97-150/default.html Keoleian, G.A. et al. (1997). Comparative assessment of wet and dry garment cleaning Part 1. Environmental and human health assessment. <i>Journal of Cleaner Production</i> 5, 279-289.	Y	N
5.3.2 Release Factor – water				
	Numeric value / percent of input amount (Water):	0.0001%	Y	Y
	Justification of RFs (Water):	The value was calculated using the estimated wastewater emissions of perchloroethylene from a dry-cleaning machine without any emission control attachments. The yearly emission rate to wastewater was normalized to the yearly mass of washed clothing to arrive at a factor expressed as the amount of solvent released to wastewater per mass of clothing that has been cleaned. USEPA (2005). Perchloroethylene Dry Cleaners Refined Human Health Risk Characterization. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. Research Triangle Park, NC. https://www.epa.gov/sites/production/files/2015-06/documents/riskassessment_dry_cleaners.pdf	Y	N
5.3.3 Release Factor – soil				
	Numeric value / percent of input amount (Soil):	0.00002%	Y	Y
	Justification of RFs (Soil):	The value was determined using the information supplied in an analysis of the perchloroethylene emissions resulting from the use of a dry-cleaning machine without any emission control attachments. The examination did not note any appreciable release of the dry-cleaning solvent to soil. USEPA (2005). Perchloroethylene Dry Cleaners Refined Human Health Risk Characterization. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. Research Triangle Park, NC. https://www.epa.gov/sites/production/files/2015-06/documents/riskassessment_dry_cleaners.pdf	Y	N
5.3.4 Release Factor – waste				
	Percent of input amount disposed as waste:	4%	Y	N
	Justification of RFs:	The waste generation factor was taken from a life cycle assessment for the use of a solvent-containing general-purpose cleaner (Curran, 2003). The reported value represents the amount of hazardous waste that is generated when 0.7 L (3 cups) are used to clean 1000 ft ² of a hard surface. An adjustment factor has not been applied to this value since the assessment is representative of use conditions associated with a wide range of professional cleaning products. Curran, M.A. (2003). Do bio-based products move us toward sustainability? A look at three USEPA case studies. <i>Environmental Progress & Sustainable Energy</i> 22, 277-292.	Y	N

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	Reference to Background Document	ESIG/ESVOC (2019). SpERC Background Document. Specific Environmental Release Categories (SpERCs) for the professional use of solvents and solvent-borne substances as binding agents, cleaning agents, and functional fluids. European Solvents Industry Group. Brussels, Belgium.	Y	N