FS Section	Content field	Explanation of content	CSR	eSDS
1. Title	1.1 Title of SPERC	Road and construction applications (professional): solvent-borne	Y	Y
	1.2 SPERC code	ESVOC SPERC 8.15.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:	Application of surface coatings and binders in road and construction activities, including paving uses, manual mastic and in the application of roofing and water-proofing membranes.	Y	Y
	2.3 List of applicable Use Descriptors			
	LCS	PW – Widespread use by professional workers	Y	Y
	SU	SU19 – Building and construction work	Y	Y
	PC	PC1 – Adhesives and sealants	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 and Emergency Response. Washington, DC. https://www.epa.gov/sites/production/files/2014-12/documents/k01005.pdf.	Y	N
	RMM limiting release to air:	No obligatory RMMs.	Y	Y

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4. Obligatory RMMs onsite	**RMM Efficiency (air):**	Emissions to air are minimized when the product is used in accordance with standard acceptable practices.	Y	Y
	Reference for RMM Efficiency (air):	Gray, J. (2018). Pollution from construction. Sustainable Build. Chesire, United Kingdom. http://www.sustainablebuild.co.uk/PollutionFromConstruction.html.	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 m³/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). Guidance on Information Requirements and Chemical Safety Assessment. Chapter R.16: Environmental Exposure Assessment 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 air are minimized when the product is used in accordance with standard acceptable practices.	Y	Y
	Reference for RMM Efficiency (soil):	Gray, J. (2018). Pollution from construction. Sustainable Build. Chesire, United Kingdom. http://www.sustainablebuild.co.uk/PollutionFromConstruction.html.	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). Guidance on Information Requirements and Chemical Safety Assessment. Chapter R.16: Environmental Exposure Assessment 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. Guidance on Information Requirements and Chemical Safety Assessment. Chapter R.16: Environmental Exposure Assessment 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 8.15.v3	Y	N
	ERC	ERC 8d ERC 8f		
	sub-SPERC applicability:	None	Y	N
	5.3.1 Release Factor – air			
	Numeric value / percent of input amount (Air)	75%	Y	Y
	Justification of RFs (Air):	The air release factor was derived from emission measurements with several different grades of cutback asphalt used in road construction and repair (USEPA, 1977). The average release for rapid, medium, and slow curing varieties was determined to be 75%, after adjusting for a petroleum	Y	N

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		diluent concentration of 35% in the asphalt. This value provides a sensible worst-case determination that is suitable for use with the entire class of surface coatings and binders used in road construction. USEPA (1977). Control of Volatile Organic Compounds from Use of Cutback Asphalt. U.S. Environmental Protection Agency, Office of Air and Waste Management, Research Triangle Park, NC. Available from: https://www3.epa.gov/airquality/ctg_act/197712_voc_epa450_2-77-037_cutback_asphalt.pdf		
	5.3.2 Release Factor – water			
	Numeric value / percent of input amount (Water):	13%	Y	Y
	Justification of RFs (Water):	The water release factor was derived using water solubility measurement for the primary petroleum hydrocarbon contained in cutback asphalt as well as along with standardized rainfall amounts established by the British Building Research Institute (Straube et al., 1998). Rainwater falling at 126 g/m² for a 6-hour period on cutback asphalt that was freshly applied at a maximum coverage volume 2.3 L/m² would result in an overall release fraction of 13% after correcting for the density of medium curing cutback asphalt and the kerosene content in the asphalt (USDOT, 2005). The 13% value provides a reasonably conservative assessment of the water release fraction that would be observed for the entire suite of road and construction products Straube J. F., Burnett E. F. P. (1998). The application of local weather data to the simulation of wind-driven rain. In Kudder RJ, Erdly JL editors. Water Leakage Through Building Facades, Conshohoken, PA: American Society of Testing Materials. ISBN: 0066-0558. USDOT (2005). Guidelines for Using Prime and Tack Coats. US Department of Transportation, Federal Highway Administration, Lakewood, CO. Available from: http://hawaiiasphalt.org/wp/wp-content/uploads/Prime-Tack-Coats-FHWA-July-2005.pdf	Y	N
	5.3.3 Release Factor – soil			
	Numeric value / percent of input amount (Soil):	10%	Y	Y
	Justification of RFs (Soil):	The value was assigned by examining the soil persistence of the kerosene used in the preparation of cutback asphalt used for soil stabilization. The total soil concentration of the aliphatic and aromatic components of kerosene showed a persistence of 9.9% at a soil depth up to 10 cm and a duration of 39 days Dror et al., 2001). These data yield a soil release factor of 10% that reliably describes the soil sorption that would be expected with the use of cutback asphalt in road construction. Dror I., Gerstl Z., Yaron B. (2001). Temporal changes in kerosene content and composition in field soil as a result of leaching. Journal of Contaminant Hydrology; 48: 305-323.	Y	N
	5.3.4 Release Factor – waste			
	Percent of input amount disposed as waste:	2%	Y	N
	Justification of RFs:	The quoted value was derived from a life cycle assessment covering the residential installation of asphalt shingles on a steep-slope roof (ARMA, 2016). An uncertainty factor has not been applied to the reported waste generation factor of 2% since the value is reasonably representative of the waste expected from the wide dispersive uses of construction products. ARMA (2016). Environmental Product Decl;aration. Asphalt Single Roofing System Installation: Fastened. Asphalt Roofing Manufacturers Association. Washington, DC. https://asphaltroofing.org/wp-content/uploads/2017/05/102.1_ARMA_EPD_Asphalt-Shingle_20161028.pdf.	Y	N
References to SPERC Background Document				
	Reference to Background Document	ESIG/ESVOC (2023). SpERC Background Document (2nd edition). Specific Environmental Release Categories (SpERCs) for the professional use of solvents and solvent-borne substances in de-icing, construction,	Y	N

FS Section	Content field	Explanation of content	CSR	eSDS
		and laboratory applications. European Solvents Industry Group. Brussels, Belgium.		