

- FS Section	Content field	Explanation of content	CSR <sup>1</sup>	eSDS <sup>2</sup>
1. Title	1.1 Title of SPERC	Functional fluid use (professional): solvent-borne	Y	Y
	1.2 SPERC code	ESVOC SPERC 9.13b.v2	Y	Y
2. Scope	<b>2.1 Substance/Product Domain</b>			
	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
	<b>2.2 Process domain</b>			
	Description of activities/processes:	Use as functional fluids (e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids (in professional equipment including maintenance and related material transfers and use of similar sealed items containing functional fluids for consumers.	Y	Y
	<b>2.3 List of applicable Use Descriptors</b>			
	LCS	PW – Widespread use by professional workers	Y	Y
	SU	SU0 – Other	Y	Y
PC	PC16 – Heat transfer fluids	Y	Y	
3. Operational conditions	<b>3.1 Conditions of use</b>			
	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
	<b>3.2 Waste Handling and Disposal</b>			
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	Y	N	

<sup>1</sup> Explanations that are more detailed can be provided for the CSR.

<sup>2</sup> For the ES for communication a standard phrase may be selected from the ECom catalogue when available. When no phrase is available yet in the catalogue the proposed phrase can be reported here.

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		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. <a href="https://www.epa.gov/sites/production/files/2014-12/documents/k01005.pdf">https://www.epa.gov/sites/production/files/2014-12/documents/k01005.pdf</a> .		
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):	Danfoss, 2016. Technical Information: Hydraulic Fluids and Lubricants Oils, Lubricants, Grease, Jelly. Danfoss Power Solutions GmbH. Neumunster, Germany. <a href="http://files.danfoss.com/documents/520L0463.pdf">http://files.danfoss.com/documents/520L0463.pdf</a> .	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 <sup>3</sup> /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). <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf">Guidance on Information Requirements and Chemical Safety Assessment. Chapter R.16: Environmental Exposure Assessment</a> Version 3.0. European Chemicals Agency. Helsinki, Finland. <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf">https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf</a>	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 the manufacturers' instructions and established practices.	Y	Y
	Reference for RMM Efficiency (soil):	Danfoss, 2016. Technical Information: Hydraulic Fluids and Lubricants Oils, Lubricants, Grease, Jelly. Danfoss Power Solutions GmbH. Neumunster, Germany. <a href="http://files.danfoss.com/documents/520L0463.pdf">http://files.danfoss.com/documents/520L0463.pdf</a> .	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). <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf">Guidance on Information Requirements and Chemical Safety Assessment. Chapter R.16: Environmental Exposure Assessment</a> Version 3.0. European Chemicals Agency. Helsinki, Finland. <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf">https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf</a>	Y	N
	5.2 Days emitting			
	Number of emission days per year:	365 (default value)	Y	Y
	Justification / information source:	ECHA, 2016. <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf">Guidance on Information Requirements and Chemical Safety Assessment. Chapter R.16: Environmental Exposure Assessment</a> Version 3.0. European Chemicals Agency. Helsinki, Finland. <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf">https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf</a>	Y	N
	5.3 Release factors			

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	<b>sub-SPERC identifier:</b>	<b>ESVOC 9.13b.v2</b>	Y	N
	ERC	ERC 9a ERC 9b		
	<b>sub-SPERC applicability:</b>	None	Y	N
<b>5.3.1 Release Factor – air</b>				
	<b>Numeric value / percent of input amount (Air)</b>	5%	Y	Y
	<b>Justification of RFs (Air):</b>	The value has been adopted from an authoritative literature source that documents the default release factors for all recognized Environmental Release Categories (ERCs). The value above represents the average default release factor for the widespread use of a functional fluid at indoor and outdoor locations (ERC 9a and ERC 9b). ECHA (2016). Guidance on Information Requirements and Chemical Safety Assessment Chapter R.16: Environmental exposure assessment Version 3.0. Appendix A.16-1. Helsinki, Finland. ( <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf">https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf</a> ).	Y	N
<b>5.3.2 Release Factor – water</b>				
	<b>Numeric value / percent of input amount (Water):</b>	5%	Y	Y
	<b>Justification of RFs (Water):</b>	The value has been adopted from an authoritative literature source that documents the default release factors for all recognized Environmental Release Categories (ERCs). The value above represents the average default release factor for the widespread use of a functional fluid at indoor and outdoor locations (ERC 9a and ERC 9b). <b>(NB this value has been changed from 2.5% to 5% based on the updated water release factor for ERC 9a published in the most recent version of the guidance document.)</b> ECHA (2016). Guidance on Information Requirements and Chemical Safety Assessment Chapter R.16: Environmental exposure assessment Version 3.0. Appendix A.16-1. Helsinki, Finland. ( <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf">https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf</a> ).	Y	N
<b>5.3.3 Release Factor – soil</b>				
	<b>Numeric value / percent of input amount (Soil):</b>	5%	Y	Y
	<b>Justification of RFs (Soil):</b>	The value has been adopted from an authoritative literature source that documents the default release factors for all recognized Environmental Release Categories (ERCs). The value above represents the average default release factor for the widespread use of a functional fluid at indoor and outdoor locations (ERC 9a and ERC 9b). <b>(NB this value has been changed from 2.5% to 5% since the indoor soil release value for ERC 9a is irrelevant (i.e. not applicable) and not zero as assumed.)</b> ECHA (2016). Guidance on Information Requirements and Chemical Safety Assessment Chapter R.16: Environmental exposure assessment Version 3.0. Appendix A.16-1. Helsinki, Finland. ( <a href="https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf">https://echa.europa.eu/documents/10162/13632/information_requirements_r16_en.pdf</a> ).	Y	N
<b>5.3.4 Release Factor – waste</b>				
	<b>Percent of input amount disposed as waste:</b>	30%	Y	N
	<b>Justification of RFs:</b>	This value is equivalent to the waste factor for a mineral oil-based hydraulic fluid finding general use in the United Kingdom (OECD, 2004).	Y	N

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		<p>The waste fraction of 30% represents the portion that is not reused or recycled and is collected for disposed for in a landfill. Since the conditions of use for this functional fluid provide a worst-case scenario for waste generation, the value has not been adjusted to account for other professional applications.</p> <p>OECD (2004). Emission Scenario Documents on Lubricants and Lubricant Additives. No. 10, Organisation for Economic Co-operation and Development. Paris, France.</p> <p><a href="http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2004)21&amp;doclanguage=en">http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2004)21&amp;doclanguage=en</a>.</p>		
<b>References to SPERC Background Document</b>				
	Reference to Background Document	<p>ESIG/ESVOC (2019). SpERC Background Document (1<sup>st</sup> draft). 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.</p>	Y	N