

FS Section	Content field	Explanation of content	CSR ¹	eSDS ²
1. Title	1.1 Title of SPERC	Metal working fluids/rolling oils (professional): solvent-borne	Y	Y
	1.2 SPERC code	ESVOC SPERC 8.7c.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	Yes	N	N
	2.2 Process domain			
	Description of activities/processes:	Covers the use in formulated MWFs including transfer operations, open and contained cutting/machining activities, automated and manual application of corrosion protections, draining and working on contaminated/ reject articles, and disposal of waste oils.	Y	Y
	2.3 List of applicable Use Descriptors			
	LCS	PW – Widespread use by professional workers	Y	Y
	SU	SU15 – Manufacture of fabricated metal products, except machinery and equipment	Y	Y
PC	PC25 – Metal working fluids	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.	Y	N

¹ Explanations that are more detailed can be provided for the CSR.

² 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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		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 .		
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 specifications.	Y	Y
	Reference for RMM Efficiency (air):	Skerlos, S.J. (2007). Prevention of Metalworking Fluid Pollution: Environmentally Conscious Manufacturing at the Machine Tool. In: Kutz, M. (Ed.), Environmentally Conscious Manufacturing. John Wiley & Sons, Hoboken, NJ, pp. 95-122.	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). 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 soil are minimized when the product is used in accordance with the manufacturers' instructions and specifications.	Y	Y
	Reference for RMM Efficiency (soil):	Skerlos, S.J. (2007). Prevention of Metalworking Fluid Pollution: Environmentally Conscious Manufacturing at the Machine Tool. In: Kutz, M. (Ed.), Environmentally Conscious Manufacturing. John Wiley & Sons, Hoboken, NJ, pp. 95-122.	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 8.7c.a.v3 VP >1000 Pa	Y	N
ERC	ERC 8a ERC 8d			
sub-SPERC applicability:	Vapour pressure >1000 Pa	Y	N	

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5.3.1 Release Factor – air				
	Numeric value / percent of input amount (Air)	1.0%	Y	Y
	Justification of RFs (Air):	This value has been adopted from a published source that documents the worst-case estimates of air emissions based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf	Y	N
5.3.2 Release Factor – water				
	Numeric value / percent of input amount (Water):	40%	Y	Y
	Justification of RFs (Water):	This value has been taken from a published emission scenario document citing the metal working fluid use and wastewater generation at numerous small metal working job shops. The average annual volume of fluid contaminated wastewater was determined to be nearly 140,000 kg/yr for a typical metal shaping job shop. When paired with the volume of fluid use, a water release factor was obtained that is representative of the emissions from small metal machining operations. OECD, 2011. Emission Scenario Document (ESD) on the Use of Metalworking Fluids. No. 28, Organisation for Economic Co-operation and Development. Paris, France. https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2011)18&doclanguage=en .	Y	N
5.3.3 Release Factor – soil				
	Numeric value / percent of input amount (Soil):	0.1%	Y	Y
	Justification of RFs (Soil):	The soil factor has been adopted from a technical guidance document that tabulates the worst-case estimates of soil releases based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf	Y	N
5.3.4 Release Factor – waste				
	Percent of input amount disposed as waste:	20%	Y	N
	Justification of RFs:	The quoted value was derived from an Emissions Scenario Document that examined the production of chemical waste during the use of neat cutting oils (OECD, 2004). A waste generation factor of 2% was associated with the adhesion of residual fluid to the metal parts being processed. An uncertainty factor of 10 has been applied to this value to account for the mishandling that may accompany the wide dispersive use of these oils. OECD (2004). Emission Scenario Documents on Lubricants and Lubricant Additives. No. 10, Organisation for Economic Co-operation and Development. Paris, France. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2004)21&doclanguage=en .	Y	N
	sub-SPERC identifier:	ESVOG 8.7c.b.v3 VP 100-1000 Pa	Y	N
	ERC	ERC 8a ERC 8d		
	sub-SPERC applicability:	Vapour pressure 100-1000 Pa	Y	N
5.3.1 Release Factor – air				

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	Numeric value / percent of input amount (Air):	0.5%	Y	Y
	Justification of RFs (Air):	This value has been adopted from a published source that documents the worst-case estimates of air emissions based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf	Y	N
5.3.2 Release Factor – water				
	Numeric value / percent of input amount (Water):	40%	Y	Y
	Justification of RFs (Water):	This value has been taken from a published emission scenario document citing the metal working fluid use and wastewater generation at numerous small metal working job shops. The average annual volume of fluid contaminated wastewater was determined to be nearly 140,000 kg/yr for a typical metal shaping job shop. When paired with the volume of fluid use, a water release factor was obtained that is representative of the emissions from small metal machining operations. OECD, 2011. Emission Scenario Document (ESD) on the Use of Metalworking Fluids. No. 28, Organisation for Economic Co-operation and Development. Paris, France. https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2011)18&doclanguage=en .	Y	N
5.3.3 Release Factor – soil				
	Numeric value / percent of input amount (Soil):	0.1%	Y	Y
	Justification of RFs (Soil):	The soil factor has been adopted from a technical guidance document that tabulates the worst-case estimates of soil releases based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf	Y	N
5.3.4 Release Factor – waste				
	Percent of input amount disposed as waste:	20%	Y	N
	Justification of RFs:	The quoted value was derived from an Emissions Scearnio document that examined the production of chemical waste during the use of neat cutting oils in an industrial operation (OECD, 2004). A waste generation factor of 2% was associated with the adhesion of residual fluid to the metal parts being processed. An uncertainty factor of 10 has been applied to this value to account for the mishandling that may accompany the wide dispersive use of these oils. OECD (2004). Emission Scenario Documents on Lubricants and Lubricant Additives. No. 10, Organisation for Economic Co-operation and Development. Paris, France. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2004)21&doclanguage=en .	Y	N
	sub-SPERC identifier:	ESVOC 8.7c.c.v3 VP 10-100 Pa	Y	N
	ERC	ERC 8a ERC 8d		
	sub-SPERC applicability:	Vapour pressure 10-100 Pa	Y	N
5.3.1 Release Factor – air				
	Numeric value / percent of input amount (Air):	0.1%	Y	Y

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	Justification of RFs (Air):	This value has been adopted from a published source that documents the worst-case estimates of air emissions based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. (https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf)	Y	N
5.3.2 Release Factor – water				
	Numeric value / percent of input amount (Water):	40%	Y	Y
	Justification of RFs (Water):	This value has been taken from a published emission scenario document citing the metal working fluid use and wastewater generation at numerous small metal working job shops. The average annual volume of fluid contaminated wastewater was determined to be nearly 140,000 kg/yr for a typical metal shaping job shop. When paired with the volume of fluid use, a water release factor was obtained that is representative of the emissions from small metal machining operations. OECD, 2011. Emission Scenario Document (ESD) on the Use of Metalworking Fluids. No. 28, Organisation for Economic Co-operation and Development. Paris, France. https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2011)18&doclanguage=en .	Y	N
5.3.3 Release Factor – soil				
	Numeric value / percent of input amount (Soil):	0.1%	Y	Y
	Justification of RFs (Soil):	The soil factor has been adopted from a technical guidance document that tabulates the worst-case estimates of soil releases based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. (https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf)	Y	N
5.3.4 Release Factor – waste				
	Percent of input amount disposed as waste:	20%	Y	N
	Justification of RFs:	The quoted value was derived from an Emissions Sceanrio document that examined the production of chemical waste during the use of neat cutting oils in an industrial operation (OECD, 2004). A waste generation factor of 2% was associated with the adhesion of residual fluid to the metal parts being processed. An uncertainty factor of 10 has been applied to this value to account for the mishandling that may accompany the wide dispersive use of these oils. OECD (2004). Emission Scenario Documents on Lubricants and Lubricant Additives. No. 10, Organisation for Economic Co-operation and Development. Paris, France. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2004)21&doclanguage=en .	Y	N
	sub-SPERC identifier:	ESVOC 8.7c.d.v VP 1-10 Pa	Y	N
	ERC	ERC 8a ERC 8d		
	sub-SPERC applicability:	Vapour pressure 1-10 Pa	Y	N
5.3.1 Release Factor – air				
	Numeric value / percent of input amount (Air):	0.05%	Y	Y

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	Justification of RFs (Air):	This value has been adopted from a published source that documents the worst-case estimates of air emissions based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf	Y	N
5.3.2 Release Factor – water				
	Numeric value / percent of input amount (Water):	40%	Y	Y
	Justification of RFs (Water):	This value has been taken from a published emission scenario document citing the metal working fluid use and wastewater generation at numerous small metal working job shops. The average annual volume of fluid contaminated wastewater was determined to be nearly 140,000 kg/yr for a typical metal shaping job shop. When paired with the volume of fluid use, a water release factor was obtained that is representative of the emissions from small metal machining operations. OECD, 2011. Emission Scenario Document (ESD) on the Use of Metalworking Fluids. No. 28, Organisation for Economic Co-operation and Development. Paris, France. https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2011)18&doclanguage=en .	Y	N
5.3.3 Release Factor – soil				
	Numeric value / percent of input amount (Soil):	0.1%	Y	Y
	Justification of RFs (Soil):	The soil factor has been adopted from a technical guidance document that tabulates the worst-case estimates of soil releases based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf	Y	N
5.3.4 Release Factor – waste				
	Percent of input amount disposed as waste:	20%	Y	N
	Justification of RFs:	The quoted value was derived from an Emissions Scenario document that examined the production of chemical waste during the use of neat cutting oils in an industrial operation (OECD, 2004). A waste generation factor of 2% was associated with the adhesion of residual fluid to the metal parts being processed. An uncertainty factor of 10 has been applied to this value to account for the mishandling that may accompany the wide dispersive use of these oils. OECD (2004). Emission Scenario Documents on Lubricants and Lubricant Additives. No. 10, Organisation for Economic Co-operation and Development. Paris, France. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2004)21&doclanguage=en .	Y	N
	sub-SPERC identifier:	ESVOC 8.7c.e.v3 VP <1 Pa	Y	N
	ERC	ERC 8a ERC 8d		
	sub-SPERC applicability:	Vapour pressure <1 Pa	Y	N
5.3.1 Release Factor – air				
	Numeric value / percent of input amount (Air):	0.01%	Y	Y

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	Justification of RFs (Air):	This value has been adopted from a published source that documents the worst-case estimates of air emissions based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf	Y	N
5.3.2 Release Factor – water				
	Numeric value / percent of input amount (Water):	40%	Y	Y
	Justification of RFs (Water):	This value has been taken from a published emission scenario document citing the metal working fluid use and wastewater generation at numerous small metal working job shops. The average annual volume of fluid contaminated wastewater was determined to be nearly 140,000 kg/yr for a typical metal shaping job shop. When paired with the volume of fluid use, a water release factor was obtained that is representative of the emissions from small metal machining operations. OECD, 2011. Emission Scenario Document (ESD) on the Use of Metalworking Fluids. No. 28, Organisation for Economic Co-operation and Development. Paris, France. https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2011)18&doclanguage=en .	Y	N
5.3.3 Release Factor – soil				
	Numeric value / percent of input amount (Soil):	0.1%	Y	Y
	Justification of RFs (Soil):	The soil factor has been adopted from a technical guidance document that tabulates the worst-case estimates of soil releases based on the expert judgement of environmental scientists from the Dutch National Institute for Public Health and the Environment (RIVM). European Commission (2003). European Commission Technical Guidance Document on Risk Assessment (EUTGD), Report EUR 20418 EN/2, Appendix 1, Table A3.8, Brussels, Belgium. https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf	Y	N
5.3.4 Release Factor – waste				
	Percent of input amount disposed as waste:	20%	Y	N
	Justification of RFs:	The quoted value was derived from an Emissions Sceanrio document that examined the production of chemical waste during the use of neat cutting oils in an industrial operation (OECD, 2004). A waste generation factor of 2% was associated with the adhesion of residual fluid to the metal parts being processed. An uncertainty factor of 10 has been applied to this value to account for the mishandling that may accompany the wide dispersive use of these oils. OECD (2004). Emission Scenario Documents on Lubricants and Lubricant Additives. No. 10, Organisation for Economic Co-operation and Development. Paris, France. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=en/jm/mono(2004)21&doclanguage=en .	Y	N
References to SPERC Background Document				
	Reference to Background Document	ESIG/ESVOC (2023). SpERC Background Document. Specific Environmental Release Categories (SpERCs) for the professional use of solvents and solvent-borne substances in high release lubricants, metalworking fluids, fuels, and low release lubricants. European Solvents Industry Group. Brussels, Belgium.	Y	N