FS Section	Content field	Explanation of content	CSR[1]	eSDS[2]
1. Title	**1.1 Title of SPERC**	Lubricants – high environmental release (consumer): solvent-borne	Y	Y
	1.2 SPERC code	ESVOC SPERC 8.6e.v2	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 of formulated lubricants in open systems including transfer operations, application, operation of engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil.	Y	Y
	2.3 List of applicable Use Descriptors			
	LCS	C – Consumer use	Y	Y
	SU	SU17 – General manufacturing	Y	Y
	PC	PC24 – Lubricants, greases, release 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:	Although household hazardous waste (HHW) represents a small portion of the total domestic waste produced by consumers, it needs to be separated from normal trash and amassed for special handling. Many regional municipalities have established voluntary procedures for the identification, collection, and disposal of HHW in a safe and efficient manner. Once amassed, the HHW can be transported to collection sites where it is reused, recycled, or incinerated. The handling and disposal of hazardous waste needs to conform with established practices and local/regional	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 ESCom catalogue when available. When no phrase is available yet in the catalogue the proposed phrase can be reported here.

FS Section	Content field	Explanation of content	CSR[1]	eSDS[2]
		regulations in order to minimize environmental release and the potential for ecological harm. Inglezakis, V.J., Moustakas, K. (2015). Household hazardous waste management: A review. Journal of Environmental Management 150, 310-321. doi: 10.1016/j.jenvman.2014.11.021.		
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):	BCERF, 1999. Safe Use and Storage of Hazardous Household Products. Cornell University, Program on Breast Cancer and Environmental Risk Factors. Ithaca, NY. https://extensionhealthyhomes.org/Documents/fs22.safeUse.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). 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/or established practices.	Y	Y
	Reference for RMM Efficiency (soil):	BCERF, 1999. Safe Use and Storage of Hazardous Household Products. Cornell University, Program on Breast Cancer and Environmental Risk Factors. Ithaca, NY. https://extensionhealthyhomes.org/Documents/fs22.safeUse.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). 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			

FS Section	Content field	Explanation of content	CSR[1]	eSDS[2]
	sub-SPERC identifier:	ESVOC 8.6e.a.v2 VP >10000 Pa	Y	N
	ERC	ERC 8a ERC 8d		
	sub-SPERC applicability:	Vapour pressure >10000 Pa	Y	N
	5.3.1 Release Factor – air			
	Numeric value / percent of input amount (Air)	60%	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 A4.2, 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):	5.0%	Y	Y
	Justification of RFs (Water):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to water during their use in the United Kingdom. An adjustment factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.3 Release Factor – soil			
	Numeric value / percent of input amount (Soil):	5.0%	Y	Y
	Justification of RFs (Soil):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to soil during their use in the United Kingdom. An adjustment factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.4 Release Factor – waste			
	Percent of input amount disposed as waste:	35%	Y	N
	Justification of RFs:	The waste generation factor was taken from a life cycle assessment of the lubricating oil used in the transportation sector (Vold, 1995). The value represents the amount of waste oil that is not collected for recycling or used as a fuel following use in Norway. Vold, M. et al. (1995). Burning or Re-refining Used Lube Oil? Life Cycle Assessments of the Environmental Impacts. Report No. OR 52.95, Ostfold Research Foundation. Fredrikstad, Norway. https://www.ostfoldforskning.no/media/1495/5295.pdf.	Y	N

FS Section	Content field	Explanation of content	CSR[1]	eSDS[2]
	sub-SPERC identifier:	ESVOC 8.6e.b.v2 VP 1000-10000 Pa	Y	N
	ERC	ERC 8a ERC 8d		
	sub-SPERC applicability:	Vapour pressure 1000-10000 Pa	Y	N
	5.3.1 Release Factor – air			
	Numeric value / percent of input amount (Air):	40%	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 A4.2, 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):	5.0%	Y	Y
	Justification of RFs (Water):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to water during their use in the United Kingdom. An adjsutment factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.3 Release Factor – soil			
	Numeric value / percent of input amount (Soil):	5.0%	Y	Y
	Justification of RFs (Soil):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to soil during their use in the United Kingdom. An adjustment factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.4 Release Factor – waste			
	Percent of input amount disposed as waste:	35%	Y	N
	Justification of RFs:	The waste generation factor was taken from a life cycle assessment of the lubricating oil used in the transportation sector (Vold, 1995). The value represents the amount of waste oil that is not collected for recycling or used as a fuel following use in Norway. Vold, M. et al. (1995). Burning or Re-refining Used Lube Oil? Life Cycle Assessments of the Environmental Impacts. Report No. OR 52.95, Ostfold Research Foundation. Fredrikstad, Norway. https://www.ostfoldforskning.no/media/1495/5295.pdf.	Y	N

FS Section	Content field	Explanation of content	CSR[1]	eSDS[2]
	sub-SPERC identifier:	ESVOC 8.6e.c.v2 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			
	Numeric value / percent of input amount (Air):	15%	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 A4.2, 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):	5.0%	Y	Y
	Justification of RFs (Water):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to water during their use in the United Kingdom. An adjustment factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.3 Release Factor – soil			
	Numeric value / percent of input amount (Soil):	5.0%	Y	Y
	Justification of RFs (Soil):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to soil during their use in the United Kingdom. An adjustment factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.4 Release Factor – waste			
	Percent of input amount disposed as waste:	35%	Y	N
	Justification of RFs:	The waste generation factor was taken from a life cycle assessment of the lubricating oil used in the transportation sector (Vold, 1995). The value represents the amount of waste oil that is not collected for recycling or used as a fuel following use in Norway. Vold, M. et al. (1995). Burning or Re-refining Used Lube Oil? Life Cycle Assessments of the Environmental Impacts. Report No. OR 52.95, Ostfold Research Foundation. Fredrikstad, Norway. https://www.ostfoldforskning.no/media/1495/5295.pdf.	Y	N

FS Section	Content field	Explanation of content	CSR[1]	eSDS[2]
	sub-SPERC identifier:	ESVOC 8.6e.d.v2 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):	1.5%	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 A4.2, 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):	5.0%	Y	Y
	Justification of RFs (Water):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to water during their use in the United Kingdom. An adj factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.3 Release Factor – soil			
	Numeric value / percent of input amount (Soil):	5.0%	Y	Y
	Justification of RFs (Soil):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to soil during their use in the United Kingdom. An adjustment factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.4 Release Factor – waste			
	Percent of input amount disposed as waste:	35%	Y	N
	Justification of RFs:	The waste generation factor was taken from a life cycle assessment of the lubricating oil used in the transportation sector (Vold, 1995). The value represents the amount of waste oil that is not collected for recycling or used as a fuel following use in Norway. Vold, M. et al. (1995). Burning or Re-refining Used Lube Oil? Life Cycle Assessments of the Environmental Impacts. Report No. OR 52.95, Ostfold Research Foundation. Fredrikstad, Norway. https://www.ostfoldforskning.no/media/1495/5295.pdf.	Y	N

FS Section	Content field	Explanation of content	CSR[1]	eSDS[2]
	sub-SPERC identifier:	ESVOC 8.6e.e.v2 VP <10 Pa	Y	N
	ERC	ERC 8a ERC 8d		
	sub-SPERC applicability:	Vapour pressure <10 Pa	Y	N
	5.3.1 Release Factor – air			
	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 A4.2, 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):	5.0%	Y	Y
	Justification of RFs (Water):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to water during their use in the United Kingdom. An adjustment factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.3 Release Factor – soil			
	Numeric value / percent of input amount (Soil):	5.0%	Y	Y
	Justification of RFs (Soil):	This value has been adopted from a published source reporting the fractional leakage of automotive crankcase oils to soil during their use in the United Kingdom. An adjustment factor of 5 has been applied to the reported value of 1% to account for the higher environmental release that would be expected to occur with some poorly-managed products. 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=env/jm/mono(2004)21&doclanguage=en.	Y	N
	5.3.4 Release Factor – waste			
	Percent of input amount disposed as waste:	35%	Y	N
	Justification of RFs:	The waste generation factor was taken from a life cycle assessment of the lubricating oil used in the transportation sector (Vold, 1995). The value represents the amount of waste oil that is not collected for recycling or used as a fuel following use in Norway. Vold, M. et al. (1995). Burning or Re-refining Used Lube Oil? Life Cycle Assessments of the Environmental Impacts. Report No. OR 52.95, Ostfold Research Foundation. Fredrikstad, Norway. https://www.ostfoldforskning.no/media/1495/5295.pdf.	Y	N

FS Section	Content field	Explanation of content	CSR[1]	eSDS[2]
References to SPERC Background Document				
	Reference to Background Document	ESIG/ESVOC (2019). SpERC Background Document (1st draft). Specific Environmental Release Categories (SpERCs) for the consumer use of solvents and solvent-borne substances in high release lubricants, fuels, and low release lubricants. European Solvents Industry Group. Brussels, Belgium.	Y	N