

| - FS Section | Content field | Explanation of content | CSR ¹ | eSDS ² |
|---------------------------|---|---|------------------|-------------------|
| 1. Title | 1.1 Title of SPERC | Cleaning agents (consumer): solvent-borne | Y | Y |
| | 1.2 SPERC code | ESVOC SPERC 8.4c.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 | 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, and air care products. | Y | Y |
| | 2.3 List of applicable Use Descriptors | | | |
| | LCS | C – Consumer use | 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: | 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 regulations in order to minimize environmental release and the potential for ecological harm. | 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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| | | 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 the 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 | | | |
| sub-SPERC identifier: | ESVOC 8.4c.v2 | Y | N | |

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| | ERC | ERC 8a ERC 8d | | |
| | sub-SPERC applicability: | None | Y | N |
| 5.3.1 Release Factor – air | | | | |
| | Numeric value / percent of input amount (Air) | 95% | Y | Y |
| | Justification of RFs (Air): | The value was assigned using a mass balance approach that takes advantage of the sector knowledge and professional judgement of individuals within the expert group responsible for creating this SpERC factsheet. The determination employs an informed decision-making process that assumed complete release of the chemical substances to the environment. Mass partitioning of the release to air, water, and soil takes into consideration the default release factors associated with ERC 8a and 8d. The assigned release factors were reviewed and agreed upon by a broad group of knowledgeable specialists within the sector organization (CEFIC, 2012). CEFIC (2012). Cefic Guidance Specific Environmental Release Categories (SPERCs) Chemical Safety Assessments, Supply Chain Communication and Downstream User Compliance. Revision 2, European Chemical Industry Council, Brussels, Belgium. http://www.cefic.org/Documents/IndustrySupport/REACH-Implementation/Guidance-and-Tools/SPERCs-Specific-Environmental-Release-Classes.pdf . | Y | N |
| 5.3.2 Release Factor – water | | | | |
| | Numeric value / percent of input amount (Water): | 2.5% | Y | Y |
| | Justification of RFs (Water): | The value was assigned using a mass balance approach that takes advantage of the sector knowledge and professional judgement of individuals within the expert group responsible for creating this SpERC factsheet. The determination employs an informed decision-making process that assumed complete release of the chemical substances to the environment. Mass partitioning of the release to air, water, and soil takes into consideration the default release factors associated with ERC 8a and 8d. The assigned release factors were reviewed and agreed upon by a broad group of knowledgeable specialists within the sector organization (CEFIC, 2012). CEFIC (2012). Cefic Guidance Specific Environmental Release Categories (SPERCs) Chemical Safety Assessments, Supply Chain Communication and Downstream User Compliance. Revision 2, European Chemical Industry Council, Brussels, Belgium. http://www.cefic.org/Documents/IndustrySupport/REACH-Implementation/Guidance-and-Tools/SPERCs-Specific-Environmental-Release-Classes.pdf . | Y | N |
| 5.3.3 Release Factor – soil | | | | |
| | Numeric value / percent of input amount (Soil): | 2.5% | Y | Y |
| | Justification of RFs (Soil): | The value was assigned using a mass balance approach that takes advantage of the sector knowledge and professional judgement of individuals within the expert group responsible for creating this SpERC factsheet. The determination employs an informed decision-making process that assumed complete release of the chemical substances to the environment. Mass partitioning of the release to air, water, and soil takes into consideration the default release factors associated with ERC 8a and 8d. The assigned release factors were reviewed and agreed upon by a broad group of knowledgeable specialists within the sector organization (CEFIC, 2012). | Y | N |

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| | | <p>CEFIC (2012). Cefic Guidance Specific Environmental Release Categories (SPERCs) Chemical Safety Assessments, Supply Chain Communication and Downstream User Compliance. Revision 2, European Chemical Industry Council, Brussels, Belgium.</p> <p>http://www.cefic.org/Documents/IndustrySupport/REACH-Implementation/Guidance-and-Tools/SPERCs-Specific-Environmental-Release-Classes.pdf.</p> | | |
| 5.3.4 Release Factor – waste | | | | |
| | Percent of input amount disposed as waste: | 4% | Y | N |
| | Justification of RFs: | <p>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 ft² 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.</p> <p>Curran, M.A. (2003). Do bio-based products move us toward sustainability? A look at three USEPA case studies. Environmental Progress & Sustainable Energy 22, 277-292.</p> | Y | N |
| References to SPERC Background Document | | | | |
| | Reference to Background Document | ESIG/ESVOC (2019). SpERC Background Document (1 st draft). Specific Environmental Release Categories (SpERCs) for the consumer use of solvents and solvent-borne substances in coatings, cleaners, and functional fluids. European Solvents Industry Group. Brussels, Belgium. | Y | N |