**SPERC factsheet – *Metal Working Fluids / Rolling Oils – Professional (Solvent-borne)***

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| **General Information** | |
| **Title of Specific ERC** | Metal Working Fluids / Rolling Oils (professional): solvent-borne |
| **Applicable ERC** | 8a – Wide dispersive indoor use of processing aids, open; 8d – Wide dispersive outdoor use of processing aids, open |
| **Responsible** | ESIG/ESVOC |
| **Version** | V1 |
| **Code** | ESVOC 8.7c.v1 |
| **Scope** | 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.  *Substance Domain*: Applicable to petroleum substances (e.g., aliphatic and aromatic hydrocarbons) and petrochemicals (e.g., ketones, alcohols, acetates, glycols, glycol ethers, and glycol ether acetates).  *Size of installation*: Applicable to professional use with an assumed use rate of 0.05% of regional tonnage  *Processing conditions*: Assumes some disposal via wastewater |
| **Coverage** | Professional Uses (Process Categories): 1 (use in closed process, no likelihood of exposure), 2 (use in closed, continuous process with occasional controlled exposure), 3 (use in closed batch process (synthesis or formulation)), 5 (mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)), 8a (transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities), 8b (transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities), 9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing) 10 (roller application or brushing), 11 (non-industrial spraying), 13 (treatment of articles by dipping and pouring), 17 Lubrication at high energy conditions and in partly open process |

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|  | **Characteristics of specific ERC** | | **Type of Input Information** | | **Processing of Input Information** | |
| **Operational Conditions** | Indoor use/outdoor use. Solvent-based process/product. Professional product use leading to emission of volatiles to air. Professional and consumer product use leading to disposal via the wastewater. | |  | |  | |
| **Obligatory onsite RMMs** | No obligatory onsite RMMs assumed | |  | | |  |
| **Substance Use Rate** | | 0.05% (no geographical or temporal peaks in use) of Regional Tonnage based on default standard town population of 10000 inhabitants. | | Default approach of the REACH guidance1 | None | |
| **Days Emitting** | | 365 days/year | | Default approach of the REACH guidance1 | None | |
| **Environmental Parameters for Fate Calculation** | | Assumed dilution factor in freshwater is 10. For marine assessments an additional tenfold dilution is assumed, i.e., dilution factor in marine water = 100. | | ERC default settings2 | None | |

1ECHA Guidance on information requirements and chemical safety assessment, Chapter R.16: Environmental Exposure Estimation, Section R.16.3.2

2ECHA Guidance on information requirements and chemical safety assessment, Chapter R.16: Environmental Exposure Estimation, Section R.16.6.3

<http://echa.europa.eu/documents/10162/17224/information_requirements_r16_en.pdf>

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|  | **Characteristics of Specific ERC** | | **Justification** |
| **Emission Fractions** | ***To Air***  VP > 10000 Pa  VP 1000-10000 Pa  VP 100-1000 Pa  VP 10-100 Pa  VP < 10 Pa | ***f* (vapor pressure)**  0.6  0.4  0.15  0.015  0.005 | EUTGD, 2003: Table A4.23. |
| ***To Municipal Wastewater/Sewer/ Water courses*** | 0.05 | Release assumed to be 5x higher than the ‘low environmental release’ scenario (see SPERC factsheet for ESVOC – ‘Lubricants – Wide dispersive use, low environmental release (Solvent-borne)’. Based on professional judgment, consistent or conservative with respect to OECD lubricants ESD4 |
| ***To Soil*** | 0.05 | Release assumed to be 5x higher than the ‘low environmental release’ scenario (see SPERC factsheet for ESVOC – ‘Lubricants – Wide dispersive use, low environmental release (Solvent-borne)’. Based on professional judgment, consistent or conservative with respect to OECD lubricants ESD4 |

3European Commission Technical Guidance Document on Risk Assessment (EUTGD) Part 2 - 2nd Edition (2003). Appendix 1 Mineral Oil and Fuel Industry, Table A4.2.

http://ihcp.jrc.ec.europa.eu/our\_activities/health-env/risk\_assessment\_of\_Biocides/doc/tgd/tgdpart2\_2ed.pdf

4OECD Emission Scenario Document on Lubricants and Lubricant Additives, Number 10, November 2004.

http://www.oecd.org/document/55/0,3746,en\_2649\_34379\_47582135\_1\_1\_1\_1,00.html

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|  | **Type of RMM** | **Typical Efficiency** |
| **Appropriate Risk Management Measures (RMM) that may be used to achieve required emission reduction** | ***Air*** | |
| *Local/Onsite Technology* | Professional product use with limited or no technical control of emission. |
| ***Water*** | |
| *Offsite Technology*  Municipal wastewater treatment plant | The removal efficiency of a sewage treatment plant can be estimated. The standard estimation is via the SimpleTreat module of EUSES or ECETOC TRA.  \*Specific substance efficiency calculated via SimpleTreat and is assumed to represent default removal efficiency. |
| *Local/Onsite Technology* | Professional product use with limited or no technical control of emission. |

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| **Narrative Description of Specific ERC** |
| Professional use of solvent-based metal working fluids encompasses a wide range of activities such as blending of fluids, transfers, operation in closed and partly open processes and waste disposal. Some disposal of product to water is assumed |

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| **Safe Use** |
| **Communication in SDS**  The REACH registrant establishes a set of standard conditions of safe use for a substance (for wide dispersive use of a solvent-borne processing aid) by adopting the conditions specified in this SPERC and recommending a Required Removal Efficiency (RRE) for adequate risk reduction. If RRE = 0, wastewater emission controls (beyond those specified by the operational conditions) are not required to ensure safe use of the substance. If > 0, the RRE may be achieved via offsite municipal sewage treatment (providing substance removal efficiency, REOffsite).  Removal efficiency requirements, as dictated by the assumed operating conditions, are documented in the Chemical Safety Report and communicated in the Safety Data Sheet. All other parameters underlying a substance exposure scenario based on the SPERC ‘Metal working fluids / rolling oils – professional (solvent-borne)’ are implicitly referred to via the reference to this SPERC.  **Scaling**  Not applicable for wide dispersive uses. |

### ESVOC 8.7c.v1

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| **Determinant Label** | **Quali-/ Quanti-tative** | **Value** | **Description of Value** | **Exposure route** | **Use conditions worker** | **Use condition consumer** | **Standard Phrase** |
| Indoor/Outdoor use | Qual | Covers Indoor and Outdoor use |  | Air/ water/ soil | e-w-3 | e-c-4 | Sames as “value” |
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