**SPERC factsheet – *De-icing applications – Wide dispersive use (Solvent-borne)***

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| **General Information** | |
| **Title of Specific ERC** | De-icing applications (wide dispersive use): solvent-borne |
| **Applicable ERC** | 8d – Wide dispersive outdoor use of processing aids, open |
| **Responsible** | ESIG/ESVOC |
| **Version** | V1 |
| **Code** | ESVOC 8.14a.v1  ESVOC 8.14b.v1 |
| **Scope** | Ice prevention and de-icing of vehicle, aircraft and other equipment by spraying.  *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 and consumer use with an assumed use rate of 0.2% 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), 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), 11 (non-industrial spraying)  Consumer Uses (Product Categories): 4 (anti-freeze and de-icing products) |

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|  | **Characteristics of specific ERC** | **Type of Input Information** |
| **Operational Conditions** | Indoor use/outdoor use. Solvent-based process/product. Professional and consumer 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** | 0.2% of Regional Tonnage based on default standard town population of 10000 inhabitants. | Default approach of the REACH guidance1 |
| **Days Emitting** | 365 days/year | Default approach of the REACH guidance1 |
| **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 |

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***  ESVOC 8.14a.v1  ESVOC 8.14b.v1 | 0.95  0.90 | 100% of substance is assumed to be released to the environment. Use of ERC8a and ERC8b defaults3, with compartment allocation based on professional judgement and mass conservation. |
| ***To Municipal Wastewater/Sewer/ Water courses***  ESVOC 8.14a.v1  ESVOC 8.14b.v1 | 0.01  0.05 | 100% of substance is assumed to be released to the environment. Use of ERC8a and ERC8b defaults3, with compartment allocation based on professional judgement and mass conservation. |
| ***To Soil***  ESVOC 8.14a.v1  ESVOC 8.14b.v1 | 0.04  0.05 | 100% of substance is assumed to be released to the environment. Use of ERC8a and ERC8b defaults3, with compartment allocation based on professional judgement and mass conservation. |

3ECHA Guidance on information requirements and chemical safety assessment, Chapter R.16: Environmental Exposure Estimation, Appendix R.16-1 Environmental Release Categories

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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 and Consumer 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 and Consumer product use with limited or no technical control of emission. |

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| **Narrative Description of Specific ERC** |
| It is assumed that use of de-icer results in 100% release to the environment with the majority being transferred to air and 1-5% reaching waste water through disposal or wash off. |

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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 ‘De-icing applications – wide dispersive use (solvent-borne)’ are implicitly referred to via the reference to this SPERC.  **Scaling**  Not applicable for wide dispersive uses. |

### ESVOC 8.14.a-b.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 | Same as “value” |
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