# ATIEL/ATC Use Group A (ind) - AddPack Generic Exposure Scenario based on boundary conditions including Nil or Low Sensitiser Concentration

| **Section 1** | **Exposure Scenario Title** |
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| Title | **Formulation & (re)packing of substances and mixtures** [GEST2_I] - **Industrial** [G26] |
| Use Descriptor | Industrial (SU3, SU10) |
| | Process Categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC |
| | Environmental Release Categories: ERC2<br>Specifc Environmental Release Categories: ATIEL-ATC SPERC 2.Ai-a.v1 |
| Processes, tasks, activities covered | Industrial formulation of lubricant additives, lubricants and greases. Includes material transfers, mixing, large and small scale packing, sampling, maintenance [ATU11] |
| **Section 2** | **Operational conditions and risk management measures** |
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| **Section 2.1** | **Control of worker exposure** |
| **Product characteristics** | |
| Physical form of product | Liquid, vapour pressure < 0.5 kPa [OC3]. |
| Concentration of substance in product | Covers percentage substance/product up to 100 % (unless stated differently) [G13a]. |
| Amounts used | *Not applicable* |
| Frequency and duration of use | Covers daily exposures up to 8 hours (unless stated differently) [G2] |
| Human factors not influenced by risk management | *Not applicable* |
| Other Operational Conditions affecting worker exposure | Covers percentage substance in the product up to 100 % (unless stated differently) [G13]. |
| **Contributing Scenarios** | **Risk Management Measures** |
| General measures applicable to all activities [CS135] | Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop [E3] |
| | Use suitable eye protection. [PPE26] Avoid direct eye contact with product also via contamination on hands. [E73] |
| General exposures [CS1]. ;<br>Use in contained systems [CS38]. Elevated Temperature [CS111] PROC2 | No other specific measures identified. [EI20] |
| Mixing operations (closed systems) [CS29]. ;<br>Batch processes at elevated temperatures [CS136]. PROC3 | Provide extract ventilation to points where emissions occur. [E54] |
| Mixing operations (open systems) [CS30]. ;<br>Batch processes at elevated temperatures [CS136].; PROC4 PROC5 | Provide extract ventilation to points where emissions occur. [E54] Avoid carrying out activities involving exposure for more than 4 hours. [OC28] |
| Mixing operations (open systems) [CS30]. ;<br>PROC4 PROC5 | Provide extract ventilation to points where emissions occur. [E54] |
| Process sampling [CS2]. PROC4, PROC8b | Avoid carrying out activities involving exposure for more than 1 hour. [OC27] Wear chemically resistant gloves (tested to EN374) in combination with specific activity training. [PPE17] |
| Bulk transfers [CS14]. ;<br>Dedicated facility [CS81] PROC8b | Avoid carrying out activities involving exposure for more than 4 hours [OC28]Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls. |
| Drum/batch transfers [CS8].<br>Dedicated facility [CS81] PROC8b | Provide extract ventilation to points where emissions occur. [E54] |
| Drum/batch transfers [CS8].<br>Non-dedicated facility [CS82] PROC8a | Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour). [E40] Avoid carrying out activities involving exposure for more than 1 hour. [OC27] Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls. |
| Equipment cleaning and maintenance [CS39]. PROC8a PROC8b | Drain down and flush system prior to equipment break-in or maintenance. [E55] Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls. [PPE18] Retain drain downs in sealed storage pending disposal or for subsequent recyle. [ENVT4] Clear spills immediately. [C&H13] |
| Drum and small package filling [CS6]. PROC9 | Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour). [E40] Wear chemically resistant gloves (tested to EN374) in combination with specific activity training. |
| Laboratory activities [CS36]. PROC15 | Avoid carrying out activities involving exposure for more than 4 hours. [OC28] |
| Storage [CS67] PROC1, PROC2 | Store substance within a closed system. [E84] |
| **Section 2.2** | **Control of environmental exposure** |
| Amounts used | |
| EU tonnage (tonnes per year) [ATE09] | |
| Fraction of EU tonnage used in region [A1] | 1 |
| Fraction of Regional tonnage used locally [A3] | 1 |
| Frequency and duration of use | |
| Emission days (days/year) [FD4] | 300 |
| Environmental factors not influenced by risk management | |
| Local freshwater dilution factor [EF1] | 10 |
| Local marine water dilution factor [EF2] | 100 |
| Other given operational conditions affecting environmental exposure | |
| Negligible wastewater emissions as process operates without water contact. [OOC20] | |

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| Release fraction to air from process (after typical onsite RMMs) [ATE11] | 5.0 E-07 |
| Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): [ATE12] | 2.00E-10 |
| Release fraction to soil from process (after typical onsite RMMs): [ATE13] | 0 |
| Technical conditions and measures at process level (source) to prevent release | |
| Common practices vary across sites thus conservative process release estimates used [TCS1] | |
| Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil | |
| Treat air emission to provide a typical removal efficiency of (%): [TCR7] | 70 |
| Prevent discharge of undissolved substance to or recover from onsite wastewater. [TCR14] | |
| User sites are assumed to be provided with oil/water separators or equivalent and for waste water to be discharged via public sewer system. [ATE14] | |
| Organisational measures to prevent/limit release from site | |
| Do not apply industrial sludge to natural soils [OMS2]. | |
| Sludge should be incinerated, contained or reclaimed [OMS3]. | |
| Conditions and measures related to municipal sewage treatment plant | |
| Estimated substance removal from wastewater via domestic sewage treatment (%) - $F_{STP}$ | 9.00E-02 |
| Assumed domestic sewage treatment plant flow ($m^3$/d) [STP5] | 2.00E+03 |
| Maximum allowable site quantity (MSafe) based on OCs and RMMs as above (kg/day): [ATE15] | 3.34E+05 |
| Conditions and measures related to external treatment of waste for disposal | |
| External treatment and disposal of waste should comply with applicable local and/or national regulations. [ETW3]. | |
| Conditions and measures related to external recovery of waste | |
| External recovery and recycling of waste should comply with applicable local and/or national regulations. [ERW1] | |
| Other environmental control measures additional to above | |
| None [ATE16] | |
| **Section 3** | **Exposure Estimation** |
| **3.1. Health** | |
| The Risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product. [ATH01] | |
| **3.2. Environment** | |
| Used ECETOC TRA model. [EE1] | |
| **Section 4** | **Guidance to check compliance with the Exposure Scenario** |
| **4.1. Health** | |
| Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. [G23] | |
| **4.2. Environment** | |
| Guidance is based on assumed operating conditions which may not be applicable to all sites: thus scaling may be necessary to define appropriate site-specific risk management measures. [DSU1] | |
| Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html). [DSU4] | |
| If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. [DSU8] | |
| For further information see www.ATIEL.org/REACH_GES. [ATG02] | |