



The technical association  
of the European lubricants  
industry



The technical committee  
of petroleum additive  
manufacturers in Europe

ATIEL/ATC  
Generic Exposure  
Scenarios

# Document 5b: GES Use Groups B-F (industrial & professional

**This spreadsheet provides the different ATIEL-ATC  
Generic Exposure Scenarios for Use Groups B-F.**

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## GES Use Groups B - F

### Purpose

The purpose of this spreadsheet is to provide you with the different ATIEL-ATC Generic Exposure Scenarios (GESs) for the Use Groups B - F.

### What is in this spreadsheet

In this spreadsheet you will find a number of tabs to assist you with completing your GESs, one for each use Group B-F split according to industrial (i) and professional (p) uses, as follows:

- a. Use Group B(i): General use of lubricants and greases in vehicles or machinery - Industrial
- b. Use Group B(p): General use of lubricants and greases in vehicles or machinery - Professional
- c. Use Group C(i): Use of lubricants and greases in open systems - Industrial
- d. Use Group C(p): Use of lubricants and greases in open systems - Professional
- e. Use Group D(i): Use of lubricants in open high temperature processes - Industrial
- f. Use Group E(i): Handling and dilution of metal working fluid concentrates - Industrial
- g. Use Group F(i): Use of lubricants in high energy open processes - Industrial
- h. Use Group Fp): Use of lubricants in high energy open processes - Professional

### Other spreadsheets

In a separate spreadsheet you will find the values to be inserted in the environmental section depending on the RDS and again for each use Group B-F split according to industrial and professional uses.

A number of other spreadsheets and documents are available on the ATIEL website to assist you with your task.

## ATIEL/ATC Use Group B (ind) - Generic Exposure Scenario based on Boundary Conditions

Section 1	Exposure Scenario Title	Comments
Title	<b>General use of lubricants and greases in vehicles or machinery [ATU01] - Industrial [G26]</b>	
Use Descriptor	Sector of Use: Industrial (SU3) Process Categories: PROC1, PROC2, PROC8b, PROC9 Environmental Release Categories: ERC4, ERC7 Specific Environmental Release Categories: ATIEL-ATC SPERC 4.Bi.v1	
Processes, tasks, activities covered	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities. [ATU06]	
<b>Section 2</b>		
<b>Section 2.1</b>		
<b>Control of worker exposure</b>		
<b>Product characteristics</b>		
Physical form of product	Liquid, vapour pressure < 0.5 kPa [OC3].	
Concentration of substance in product	Covers use of substance/product up to 100% (unless stated differently) [ATG01]	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]	
Other Operational Conditions affecting worker exposure	Assumes use at not > 20°C above ambient, unless stated differently [G15] Assumes a good basic standard of occupational hygiene is implemented [G1].	
<b>Contributing Scenarios</b>		
<b>Risk Management Measures</b> <i>Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organisational measures, 4. Personal protection.</i>		
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 (closed systems) [CS15]. <b>PROC1</b>	No other specific measures identified. [E120]	
Initial factory fill of equipment [CS75]; Use in contained systems [CS38]. <b>PROC2, PROC9</b>	No other specific measures identified. [E120]	
Initial factory fill of equipment [CS75]; (open systems) [CS108] <b>PROC8b</b>	Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour) [E40]. Avoid carrying out operation involving exposure for more than 4 hours [OC28]	
Operation of equipment containing engine oils and similar [CS26]; Use in contained systems [CS38]. <b>PROC1</b>	No other specific measures identified. [E120]	
Equipment cleaning and maintenance [CS39]. <b>PROC8b</b>	Drain down system prior to equipment break-in or maintenance [E65]. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) [E11] Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. Retain drain downs in sealed storage pending disposal or for subsequent recycle [ENVT4].	
Equipment cleaning and maintenance [CS39]. Operation is carried out at elevated temperature (> 20°C above ambient temperature) [OC7] <b>PROC8b</b>	Drain down system prior to equipment break-in or maintenance [E65].; Provide extract ventilation to emission points when contact with warm (>50 deg C) lubricant is likely [E67]. 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 recycle [ENVT4].	
Storage [CS67] <b>PROC1, PROC2</b>	Store substance within a closed system [E84]	
<b>Section 2.2</b>		
<b>Control of environmental exposure</b>		
<b>Amounts used</b>		
EU tonnage (tonnes per year) [ATE09]	<i>insert value from Environmental GES values table</i>	
Fraction of EU tonnage used in region [A1]	0.1	
Fraction of Regional tonnage used locally [A3]	0.1	
<b>Frequency and duration of use</b>		
Emission days (days/year) [FD4]	300	
<b>Environmental factors not influenced by risk management</b>		
Local freshwater dilution factor [EF1]	10	

Use 20 days for TriPP, CAS 115-86-6, EC 204-112-2  
This value is the default for low tonnage based on ECHA guidance  
The data is for information only and has been used by the supplier to determine the safe use quantity (Msafe) for the product.

Section 2.2		Control of environmental exposure
Local marine water dilution factor [EF2]		100
<b>Other given operational conditions affecting environmental exposure</b>		
Negligible wastewater emissions as process operates without water contact. [OOC20]		
Release fraction to air from process (after typical onsite RMMs) [ATE11]		5.0 E-05
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): [ATE12]	<i>insert value from Environmental GES values table</i>	
Release fraction to soil from process (after typical onsite RMMs): [ATE13]		0
<b>Technical conditions and measures at process level (source) to prevent release</b>		
Common practices vary across sites thus conservative process release estimates used [TCS1]		
<b>Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>		
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]		
<b>Organisational measures to prevent/limit release from site</b>		
Do not apply industrial sludge to natural soils [OMS2].		
Sludge should be incinerated, contained or reclaimed [OMS3].		
<b>Conditions and measures related to municipal sewage treatment plant</b>		
Estimated substance removal from wastewater via domestic sewage treatment (%) - $F_{STP}$ [STP3]	<i>insert value from Environmental GES values table</i>	
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]	<i>insert value from Environmental GES values table</i>	
<b>Conditions and measures related to external treatment of waste for disposal</b>		
External treatment and disposal of waste should comply with applicable local and/or national regulations. [ETW3].		
<b>Conditions and measures related to external recovery of waste</b>		
External recovery and recycling of waste should comply with applicable local and/or national regulations. [ERW1]		
<b>Other environmental control measures additional to above</b>		
None [ATE16]		
Section 3		Exposure Estimation
<b>3.1. Health</b>		
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]		
<b>3.2. Environment</b>		
Used ECETOC TRA model. [EE1]		
Section 4		Guidance to check compliance with the Exposure Scenario
<b>4.1. Health</b>		
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. [G23]		
<b>4.2. Environment</b>		
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 ( <a href="http://cefic.org/en/reach-for-industries-libraries.html">http://cefic.org/en/reach-for-industries-libraries.html</a> ) [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 <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a> [ATG02]		

## ATIEL/ATC Use Group B (prof) - Generic Exposure Scenario based on Boundary Conditions

Section 1	Exposure Scenario Title
Title	<b>General use of lubricants and greases in vehicles or machinery [ATU01] - Professional [G27]</b>
Use Descriptor	Professional (SU22) PROC1, PROC2, PROC8a, PROC8b, PROC20 ERC9a, ERC9b Specific Environmental Release Categories: ATIEL-ATC SPERC 9.Bp.v1
Processes, tasks, activities covered	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities. [ATU06]
Section 2 Operational conditions and risk management measures	
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 use of substance/product up to 100% (unless stated differently) [ATG01]
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20°C above ambient, unless stated differently [G15] Assumes a good basic standard of occupational hygiene is implemented [G1].
Contributing Scenarios Risk Management Measures	
General measures applicable to all activities [CS135]	<i>Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organisational measures, 4. Personal protection.</i> 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]
Operation of equipment containing engine oils and similar [CS26]; Use in contained systems [CS38] PROC1	No other specific measures identified [EI20].
Material transfers [CS3]. ; Non-dedicated facility [CS82] PROC8a	Avoid carrying out activities involving exposure for more than 4 hours [OC28] Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Equipment cleaning and maintenance [CS39]. Dedicated facility [CS81] PROC8b, PROC20	Drain down system prior to equipment break-in or maintenance [E65]. Retain drain downs in sealed storage pending disposal or for subsequent recycle [ENVT4].
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]	<i>insert value from Environmental GES values table</i>
Fraction of EU tonnage used in region [A1]	0.1
Fraction of Regional tonnage used locally [A3]	0.1
Frequency and duration of use	
Emission days (days/year) [FD4]	365
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]	
Release fraction to air from process (after typical onsite RMMs) [ATE11]	<i>insert value from Environmental GES values table</i>
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): [ATE12]	5.00E-04
Release fraction to soil from process (after typical onsite RMMs): [ATE13]	1.00E-03
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	
Prevent discharge of undissolved substance to or recover from onsite wastewater. [TCR14]	
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	

<b>Section 2.2</b>	<b>Control of environmental exposure</b>
Estimated substance removal from wastewater via domestic sewage treatment (%) - $F_{STP}$ [STP3]	<i>insert value from Environmental GES values table</i>
Assumed domestic sewage treatment plant flow (m <sup>3</sup> /d) [STP5]	2.00E+03
Maximum allowable site quantity (MSafe) based on OCs and RMMs as above (kg/day): [ATE15]	<i>insert value from Environmental GES values table</i>
<b>Conditions and measures related to external treatment of waste for disposal</b>	
External treatment and disposal of waste should comply with applicable local and/or national regulations. [ETW3].	
<b>Conditions and measures related to external recovery of waste</b>	
External recovery and recycling of waste should comply with applicable local and/or national regulations. [ERW1]	
<b>Other environmental control measures additional to above</b>	
None [ATE16]	
<b>Section 3</b>	<b>Exposure Estimation</b>
<b>3.1. Health</b>	
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]	
<b>3.2. Environment</b>	
Used ECETOC TRA model. [EE1]	
<b>Section 4</b>	<b>Guidance to check compliance with the Exposure Scenario</b>
<b>4.1. Health</b>	
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. [G23]	
<b>4.2. Environment</b>	
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 ( <a href="http://cefic.org/en/reach-for-industries-libraries.html">http://cefic.org/en/reach-for-industries-libraries.html</a> ) [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 <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a> [ATG02]	

## ATIEL/ATC Use Group C (ind) - Generic Exposure Scenario based on Boundary Conditions

Section 1	Exposure Scenario Title	Comments
Title	<b>Use of lubricants and greases in open systems [ATU02] - Industrial [G26]</b>	
Use Descriptor	Sector of Use: Industrial (SU3) PROC1, PROC2, PROC7, PROC8b, PROC9, PROC10, PROC13 ERC4 Specific Environmental Release Categories: ATIEL-ATC SPERC 4.Ci.v1	
Processes, tasks, activities covered	Covers use of lubricants and greases in open systems, including application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways. Includes associated product storage, material transfers, sampling and maintenance activities. [ATU07]	
<b>Section 2</b>		
<b>Operational conditions and risk management measures</b>		
<b>Section 2.1</b>		
<b>Control of worker exposure</b>		
Product characteristics		
Physical form of product	Liquid, vapour pressure < 0.5 kPa [OC3].	
Concentration of substance in product	Covers use of substance/product up to 100% (unless stated differently) [ATG01]	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]	
Other Operational Conditions affecting worker exposure	Assumes use at not > 20°C above ambient, unless stated differently [G15] Assumes a good basic standard of occupational hygiene is implemented [G1].	
<b>Contributing Scenarios</b>	<b>Risk Management Measures</b> <i>Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organisational measures, 4. Personal protection.</i>	
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] Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying [E4] Use suitable eye protection. [PPE26] Avoid direct eye contact with product also via contamination on hands. [E73]	
Material transfers [CS3]. Manual [CS34]. <b>PROC8b</b>	Avoid carrying out activities involving exposure for more than 1 hour [OC27]	
Material transfers [CS3]. ; Automated process with (semi) closed systems [CS93] <b>PROC8b, PROC9</b>	Ensure material transfers are under containment or extract ventilation [E66].	
Roller, spreader, flow application [CS98] <b>PROC10</b>	Provide extract ventilation to points where emissions occur [E54].	
Spraying [CS10]. <b>PROC7</b>	Carry out in a vented booth or extracted enclosure [E57]. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].	
Treatment by dipping and pouring [CS35]. <b>PROC13</b>	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 intensive management supervision controls [PPE18].	
Equipment cleaning and maintenance [CS39]. <b>PROC8b</b>	Drain down system prior to equipment break-in or maintenance [E65]. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) [E11]. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17]. Retain drain downs in sealed storage pending disposal or for subsequent recycle [ENVT4].	
Storage [CS67] <b>PROC1, PROC2</b>	Store substance within a closed system. [E84]	
<b>Section 2.2</b>		
<b>Control of environmental exposure</b>		
<b>Amounts used</b>		
EU tonnage (tonnes per year) [ATE09]	<i>insert value from Environmental GES values table</i>	
Fraction of EU tonnage used in region [A1]		0.1
Fraction of Regional tonnage used locally [A3]		0.1
<b>Frequency and duration of use</b>		
Emission days (days/year) [FD4]		300
<div style="font-size: small;">           Use 20 days for TriPP, CAS 115-86-6, EC 204-112-2            This value is the default for low tonnage based on ECHA guidance.            The data is for information only and has been used by the supplier to determine the safe use quantity (Msafe) for the product.         </div>		
<b>Environmental factors not influenced by risk management</b>		
Local freshwater dilution factor [EF1]		10
Local marine water dilution factor [EF2]		100
<b>Other given operational conditions affecting environmental exposure</b>		

Section 2.2		Control of environmental exposure
Negligible wastewater emissions as process operates without water contact. [OOC20]		
Release fraction to air from process (after typical onsite RMMs) [ATE11]		5.0 E-05
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): [ATE12]	<i>insert value from Environmental GES values table</i>	
Release fraction to soil from process (after typical onsite RMMs): [ATE13]		0
<b>Technical conditions and measures at process level (source) to prevent release</b>		
Common practices vary across sites thus conservative process release estimates used [TCS1]		
<b>Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>		
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]		
<b>Organisational measures to prevent/limit release from site</b>		
Do not apply industrial sludge to natural soils [OMS2].		
Sludge should be incinerated, contained or reclaimed [OMS3].		
<b>Conditions and measures related to municipal sewage treatment plant</b>		
Estimated substance removal from wastewater via domestic sewage treatment (%) - $F_{STP}$ [STP3]	<i>insert value from Environmental GES values table</i>	
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]	<i>insert value from Environmental GES values table</i>	
<b>Conditions and measures related to external treatment of waste for disposal</b>		
External treatment and disposal of waste should comply with applicable local and/or national regulations. [ETW3].		
<b>Conditions and measures related to external recovery of waste</b>		
External recovery and recycling of waste should comply with applicable local and/or national regulations. [ERW1]		
<b>Other environmental control measures additional to above</b>		
None [ATE16]		
Section 3		Exposure Estimation
<b>3.1. Health</b>		
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]		
<b>3.2. Environment</b>		
Used ECETOC TRA model. [EE1]		
Section 4		Guidance to check compliance with the Exposure Scenario
<b>4.1. Health</b>		
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. [G23]		
<b>4.2. Environment</b>		
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 ( <a href="http://cefic.org/en/reach-for-industries-libraries.html">http://cefic.org/en/reach-for-industries-libraries.html</a> ) [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 <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a> [ATG02]		



ATIEL/ATC Use Group C (prof) - Generic Exposure Scenario based on Boundary Conditions	
<b>Section 1</b>	
Title	<b>Use of lubricants and greases in open systems [ATU02] - Professional [G27]</b>
Use Descriptor	Professional (SU22) PROC1, PROC2, PROC8a, PROC10, PROC11, PROC13  Environmental Release Categories: ERC8a, ERC8d Specific Environmental Release Categories: ATIEL-ATC SPERC 8.Cp.v1
Processes, tasks, activities covered	Covers use of lubricants and greases in open systems, including application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways. Includes associated product storage, material transfers, sampling and maintenance activities. [ATU07]
<b>Section 2</b>	
<b>Operational conditions and risk management measures</b>	
<b>Section 2.1</b>	
<b>Control of worker exposure</b>	
<b>Product characteristics</b>	
Physical form of product	Liquid, vapour pressure < 0.5 kPa [OC3].
Concentration of substance in product	Covers use of substance/product up to 100% (unless stated differently) [ATG01]
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20°C above ambient, unless stated differently [G15] Assumes a good basic standard of occupational hygiene is implemented [G1].
<b>Contributing Scenarios</b>	
<b>Risk Management Measures</b> <i>Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organisational measures, 4. Personal protection.</i>	
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] Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying [E4] Use suitable eye protection. [PPE26] Avoid direct eye contact with product also via contamination on hands. [E73]
Material transfers [CS3]. ; Manual [CS34]. PROC8a	Avoid carrying out activities involving exposure for more than 1 hour [OC27]
Roller, spreader, flow application [CS98] PROC10	Provide a good standard of general ventilation. Natural ventilation is from windows and doors etc. Controlled ventilation means air is supplied or removed by a powered fan. [E1]. Avoid carrying out activities involving exposure for more than 4 hours [OC28]Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Spraying [CS10]. PROC11	Provide a good standard of general ventilation. Natural ventilation is from windows and doors etc. Controlled ventilation means air is supplied or removed by a powered fan. [E1]. Avoid carrying out activities involving exposure for more than 1 hour [OC27]Wear a respirator conforming to EN140 with Type A/P2 filter or better (PPE29); Wear suitable coveralls to prevent exposure to the skin [PPE27].; Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Treatment by dipping and pouring [CS35]. PROC13	Provide a good standard of general ventilation. Natural ventilation is from windows and doors etc. Controlled ventilation means air is supplied or removed by a powered fan. [E1].
Equipment cleaning and maintenance [CS39]. PROC8a	Drain down system prior to equipment break-in or maintenance [E65].Provide a good standard of general ventilation. Natural ventilation is from windows and doors etc. Controlled ventilation means air is supplied or removed by a powered fan. [E1]. Avoid carrying out activities involving exposure for more than 4 hours [OC28] Retain drain downs in sealed storage pending disposal or for subsequent recycle [ENVT4].
Storage [CS67] PROC1, PROC2	Store substance within a closed system. [E84]
<b>Section 2.2</b>	
<b>Control of environmental exposure</b>	
<b>Amounts used</b>	
EU tonnage (tonnes per year) [ATE09]	<i>insert value from Environmental GES values table</i>
Fraction of EU tonnage used in region [A1]	0.1
Fraction of Regional tonnage used locally [A3]	0.1
<b>Frequency and duration of use</b>	
Emission days (days/year) [FD4]	365
<b>Environmental factors not influenced by risk management</b>	
Local freshwater dilution factor [EF1]	10
Local marine water dilution factor [EF2]	100
<b>Other given operational conditions affecting environmental exposure</b>	
Negligible wastewater emissions as process operates without water contact. [OOC20]	
Release fraction to air from process (after typical onsite RMMs) [ATE11]	<i>insert value from Environmental GES values table</i>
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): [ATE12]	5.00E-04
Release fraction to soil from process (after typical onsite RMMs): [ATE13]	1.00E-03
<b>Technical conditions and measures at process level (source) to prevent release</b>	
Common practices vary across sites thus conservative process release estimates used [TCS1]	
<b>Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>	
Prevent discharge of undissolved substance to or recover from onsite wastewater. [TCR14]	
<b>Organisational measures to prevent/limit release from site</b>	

<b>Section 2.2</b>	<b>Control of environmental exposure</b>
Do not apply industrial sludge to natural soils [OMS2].	
Sludge should be incinerated, contained or reclaimed [OMS3].	
<b>Conditions and measures related to municipal sewage treatment plant</b>	
Estimated substance removal from wastewater via domestic sewage treatment (%) - $F_{STP}$ [STP3]	<i>insert value from Environmental GES values table</i>
Assumed domestic sewage treatment plant flow (m <sup>3</sup> /d) [STP5]	2.00E+03
Maximum allowable site quantity (MSafe) based on OCs and RMMs as above (kg/day): [ATE15]	<i>insert value from Environmental GES values table</i>
<b>Conditions and measures related to external treatment of waste for disposal</b>	
External treatment and disposal of waste should comply with applicable local and/or national regulations. [ETW3].	
<b>Conditions and measures related to external recovery of waste</b>	
External recovery and recycling of waste should comply with applicable local and/or national regulations. [ERW1]	
<b>Other environmental control measures additional to above</b>	
None [ATE16]	
<b>Section 3</b>	<b>Exposure Estimation</b>
<b>3.1. Health</b>	
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]	
<b>3.2. Environment</b>	
Used ECETOC TRA model. [EE1]	
<b>Section 4</b>	<b>Guidance to check compliance with the Exposure Scenario</b>
<b>4.1. Health</b>	
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. [G23]	
<b>4.2. Environment</b>	
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 ( <a href="http://cefic.org/en/reach-for-industries-libraries.html">http://cefic.org/en/reach-for-industries-libraries.html</a> ) [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 <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a> [ATG02]	

ATIEL/ATC Use Group D (ind) - Generic Exposure Scenario based on Boundary Conditions		
Section 1	Exposure Scenario Title	Comments
Title	<b>Use of lubricants in open high temperature processes [ATU03] - Industrial [G26]</b>	
Use Descriptor	Industrial (SU3) Process Categories: PROC1, PROC2, PROC8b, PROC13 Environmental Release Categories: ERC4	
Processes, tasks, activities covered	Covers use of lubricants in open high temperature processes, e.g. quenching fluids, glass release agents. Includes associated product storage, material transfers, sampling and maintenance activities. [ATU08]	
<b>Section 2 Operational conditions and risk management measures</b>		
<b>Section 2.1 Control of worker exposure</b>		
<b>Product characteristics</b>		
Physical form of product	Liquid, vapour pressure < 0.5 kPa [OC3].	
Concentration of substance in product	Covers use of substance/product up to 100% (unless stated differently) [ATG01]	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]	
Other Operational Conditions affecting worker exposure	Assumes use at not > 20°C above ambient, unless stated differently [G15] Assumes a good basic standard of occupational hygiene is implemented [G1].	
<b>Contributing Scenarios Risk Management Measures</b>		
<i>Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organisational measures, 4. Personal protection.</i>		
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] Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying. [E4] Use suitable eye protection. [PPE26] Avoid direct eye contact with product also via contamination on hands. [E73]	
Filling / preparation of equipment from drums or containers. [CS45]. ; Dedicated facility [CS81] PROC8b	Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour) [E40].	
Dipping, immersion and pouring [CS4]. (closed systems) [CS107] PROC13	Carry out in a vented booth or extracted enclosure [E57].	
Dipping, immersion and pouring [CS4]. (open systems) [CS108] PROC13	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 [PPE17].	
Material transfers [CS3]. Equipment cleaning and maintenance [CS39]. Dedicated facility [CS81] PROC8b	Drain down system prior to equipment break-in or maintenance [E65]. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) [E11] Avoid carrying out operation involving exposure for more than 4 hours. [OC28] Wear suitable gloves tested to EN374 [PPE15]. Retain drain downs in sealed storage pending disposal or for subsequent recycle [ENVT4].	
Storage [CS67] PROC1, PROC2	Store substance within a closed system [E84]	
<b>Section 2.2 Control of environmental exposure</b>		
No exposure assessment presented for the environment. [G40].		Analysis of products assigned to use group D1 has determined that typically they do not contain environmentally classified components. Section 2.2 may be suppressed.
<b>Amounts used</b>		
EU tonnage (tonnes per year) [ATE09]		
Fraction of EU tonnage used in region [A1]		
Fraction of Regional tonnage used locally [A3]		
<b>Frequency and duration of use</b>		
Emission days (days/year) [FD4]		
<b>Environmental factors not influenced by risk management</b>		
Local freshwater dilution factor [EF1]		
Local marine water dilution factor [EF2]		
<b>Other given operational conditions affecting environmental exposure</b>		
Release fraction to air from process (after typical onsite RMMs) [ATE11]		
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): [ATE12]		
Release fraction to soil from process (after typical onsite RMMs): [ATE13]		
<b>Technical conditions and measures at process level (source) to prevent release</b>		

<b>Section 2.2</b>		<b>Control of environmental exposure</b>
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil		
Organisational measures to prevent/limit release from site		
Conditions and measures related to municipal sewage treatment plant		
Estimated substance removal from wastewater via domestic sewage treatment (%) - F <sub>STP</sub> [STP3]		
Assumed domestic sewage treatment plant flow (m <sup>3</sup> /d) [STP5]		
Maximum allowable site quantity (MSafe) based on OCs and RMMs as above (kg/day): [ATE15]		
Conditions and measures related to external treatment of waste for disposal		
Conditions and measures related to external recovery of waste		
Other environmental control measures additional to above		
<b>Section 3</b>		<b>Exposure Estimation</b>
<b>3.1. Health</b>		
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]		
<b>3.2. Environment</b>		
No exposure assessment presented for the environment. [G40].		Analysis of products assigned to use group Di has determined that typically they do not contain environmentally classified components.
<b>Section 4</b>		<b>Guidance to check compliance with the Exposure Scenario</b>
<b>4.1. Health</b>		
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. [G23]		
<b>4.2. Environment</b>		
No exposure assessment presented for the environment. [G40].		Analysis of products assigned to use group Di has determined that typically they do not contain environmentally classified components.

**ATIEL/ATC Use Group E (ind) - Generic Exposure Scenario based on Boundary Conditions**

Section 1	Exposure Scenario Title	Comments
Title	<b>Handling and dilution of metal working fluid concentrates [ATU04] - Industrial [G26]</b>	
Use Descriptor	Industrial (SU3) Process Categories: PROC1, PROC2, PROC5, PROC8b Environmental Release Categories: ERC2 Specific Environmental Release Categories: ATIEL-ATC SPERC 2.Ei.v1	
Processes, tasks, activities covered	Handling and dilution of metal working fluid concentrates. Includes associated product storage, material transfers, sampling and maintenance activities. [ATU09]	
<b>Section 2</b>	<b>Operational conditions and risk management measures</b>	
<b>Section 2.1</b>	<b>Control of worker exposure</b>	
<b>Product characteristics</b>		
Physical form of product	Liquid, vapour pressure < 0.5 kPa [OC3].	
Concentration of substance in product	Covers use of substance/product up to 100% (unless stated differently) [ATG01]	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]	
Other Operational Conditions affecting worker exposure	Assumes use at not > 20°C above ambient, unless stated differently [G15] Assumes a good basic standard of occupational hygiene is implemented [G1].	
<b>Contributing Scenarios</b>	<b>Risk Management Measures</b> <i>Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organisational measures, 4. Personal protection.</i>	
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]	
Filling / preparation of equipment from drums or containers. [CS45]. PROC5, PROC8b	Avoid carrying out activities involving exposure for more than 4 hours [OC28]	
Process sampling [CS2]. PROC8b	Avoid carrying out activities involving exposure for more than 4 hours [OC28]	
Equipment cleaning and maintenance [CS39]. PROC8b	Drain down system prior to equipment break-in or maintenance [E65]. Avoid carrying out activities involving exposure for more than 4 hours. [OC28] Retain drain downs in sealed storage pending disposal or for subsequent recycle [ENV4].	
Storage [CS67] PROC1, PROC2	Store substance within a closed system [E84]	
<b>Section 2.2</b>	<b>Control of environmental exposure</b>	
<b>Amounts used</b>		
EU tonnage (tonnes per year) [ATE09]	<i>insert value from Environmental GES values table</i>	
Fraction of EU tonnage used in region [A1]	0.1	
Fraction of Regional tonnage used locally [A3]	0.1	
<b>Frequency and duration of use</b>		
Emission days (days/year) [FD4]	300	Use 20 days for TriPP, CAS 115-86-6, EC 204-112-2 This value is the default for low tonnage based on ECHA guidance The data is for information only and has been used by the supplier to determine the safe use quantity (Msafe) for the product.
<b>Environmental factors not influenced by risk management</b>		
Local freshwater dilution factor [EF1]	10	
Local marine water dilution factor [EF2]	100	
<b>Other given operational conditions affecting environmental exposure</b>		
Water-based (oil in water emulsion) or straight oil (contains no water) process. [ATE10]		
Release fraction to air from process (after typical onsite RMMs) [ATE11]	5.0 E-05	
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): [ATE12]	<i>insert value from Environmental GES values table</i>	
Release fraction to soil from process (after typical onsite RMMs): [ATE13]	0	
<b>Technical conditions and measures at process level (source) to prevent release</b>		
Common practices vary across sites thus conservative process release estimates used [TCS1]		
<b>Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>		

<b>Section 2.2</b>		<b>Control of environmental exposure</b>	
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]			
<b>Organisational measures to prevent/limit release from site</b>			
Do not apply industrial sludge to natural soils [OMS2].			
Sludge should be incinerated, contained or reclaimed [OMS3].			
<b>Conditions and measures related to municipal sewage treatment plant</b>			
Estimated substance removal from wastewater via domestic sewage treatment (%) - F <sub>STP</sub> [STP3]		<i>insert value from Environmental GES values table</i>	
Assumed domestic sewage treatment plant flow (m <sup>3</sup> /d) [STP5]			2.00E+03
Maximum allowable site quantity (MSafe) based on OCs and RMMs as above (kg/day): [ATE15]		<i>insert value from Environmental GES values table</i>	
<b>Conditions and measures related to external treatment of waste for disposal</b>			
External treatment and disposal of waste should comply with applicable local and/or national regulations. [ETW3].			
<b>Conditions and measures related to external recovery of waste</b>			
External recovery and recycling of waste should comply with applicable local and/or national regulations. [ERW1]			
<b>Other environmental control measures additional to above</b>			
None [ATE16]			
<b>Section 3</b>		<b>Exposure Estimation</b>	
<b>3.1. Health</b>			
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]			
<b>3.2. Environment</b>			
Used ECETOC TRA model. [EE1]			
<b>Section 4</b>		<b>Guidance to check compliance with the Exposure Scenario</b>	
<b>4.1. Health</b>			
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. [G23]			
<b>4.2. Environment</b>			
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 ( <a href="http://cefic.org/en/reach-for-industries-libraries.html">http://cefic.org/en/reach-for-industries-libraries.html</a> ) [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 <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a> [ATG02]			

## GES Use Group F (ind) - Generic Exposure Scenario based on Boundary Conditions

Section 1	Exposure Scenario Title	Comments
Title	<b>Use of lubricants in high energy open processes [ATU05] - Industrial [G26]</b>	
Use Descriptor	Sector of Use: Industrial (SU3) Process Categories: PROC1, PROC2, PROC8b, PROC17, PROC18 Environmental Release Categories: ERC4 Specific Environmental Release Categories: ATIEL-ATC SPERC 4.Fi.v1	
Processes, tasks, activities covered	Covers use of lubricants in high energy open processes, e.g. in high speed machinery such as metal rolling/forming or metal working fluids for machining and grinding. Includes associated product storage, material transfers, sampling and maintenance activities. [ATU10]	
<b>Section 2</b>		
<b>Operational conditions and risk management measures</b>		
<b>Section 2.1</b>		
<b>Control of worker exposure</b>		
<b>Product characteristics</b>		
Physical form of product	Liquid, vapour pressure < 0.5 kPa [OC3].	
Concentration of substance in product	Covers use of substance/product up to 100% (unless stated differently) [ATG01]	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]	
Other Operational Conditions affecting worker exposure	Assumes use at not > 20°C above ambient, unless stated differently [G15] Assumes a good basic standard of occupational hygiene is implemented [G1].	
<b>Contributing Scenarios</b>	<b>Risk Management Measures</b> <i>Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organisational measures, 4. Personal protection.</i>	
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]	
Filling / preparation of equipment from drums or containers. [CS45]. <b>PROC8b</b>	No other specific measures identified. [E120]	
Metal machining operations [CS79] <b>PROC17</b>	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings [E60].	
Operation and lubrication of high energy open equipment [CS17]. <b>PROC17, PROC18</b>	Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour) [E40].	
Automated metal rolling/forming [CS80] Use in contained systems [CS38]. Operation is carried out at elevated temperature (> 20°C above ambient temperature) [OC7] <b>PROC2</b>	No other specific measures identified. [E120]	
Semi-automated metal rolling/forming [CS83] (open systems) [CS108] Operation is carried out at elevated temperature (> 20°C above ambient temperature) [OC7] <b>PROC17</b>	Provide extract ventilation to points where emissions occur [E54].	
Equipment cleaning and maintenance [CS39]. <b>PROC8b</b>	Drain down system prior to equipment break-in or maintenance [E65]. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). [E11] Retain drain downs in sealed storage pending disposal or for subsequent recycle [ENVT4].	
Storage [CS67] <b>PROC1, PROC2</b>	Store substance within a closed system. [E84]	
<b>Section 2.2</b>		
<b>Control of environmental exposure</b>		
<b>Amounts used</b>		
EU tonnage (tonnes per year) [ATE09]	<i>insert value from Environmental GES values table</i>	
Fraction of EU tonnage used in region [A1]	0.1	
Fraction of Regional tonnage used locally [A3]	0.1	
<b>Frequency and duration of use</b>		
Emission days (days/year) [FD4]	300	Use 20 days for TriPP. CAS 115-86-6, EC 204-112-2 This value is the default for low tonnage based on ECHA guidance. The data is for information only and has been used by the supplier to determine the safe use quantity (M <sub>safe</sub> ) for the product.
<b>Environmental factors not influenced by risk management</b>		
Local freshwater dilution factor [EF1]	10	
Local marine water dilution factor [EF2]	100	

<b>Section 2.2</b>		<b>Control of environmental exposure</b>
Other given operational conditions affecting environmental exposure		
Water-based (oil in water emulsion) or straight oil (contains no water) process. [ATE10]		
Release fraction to air from process (after typical onsite RMMs) [ATE11]		5.0 E-05
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): [ATE12]		<i>insert value from Environmental GES values table</i>
Release fraction to soil from process (after typical onsite RMMs): [ATE13]		0
<b>Technical conditions and measures at process level (source) to prevent release</b>		
Common practices vary across sites thus conservative process release estimates used [TCS1]		
<b>Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>		
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]		
<b>Organisational measures to prevent/limit release from site</b>		
Do not apply industrial sludge to natural soils [OMS2].		
Sludge should be incinerated, contained or reclaimed [OMS3].		
<b>Conditions and measures related to municipal sewage treatment plant</b>		
Estimated substance removal from wastewater via domestic sewage treatment (%) - $F_{STP}$ [STP3]		<i>insert value from Environmental GES values table</i>
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]		<i>insert value from Environmental GES values table</i>
<b>Conditions and measures related to external treatment of waste for disposal</b>		
External treatment and disposal of waste should comply with applicable local and/or national regulations. [ETW3].		
<b>Conditions and measures related to external recovery of waste</b>		
External recovery and recycling of waste should comply with applicable local and/or national regulations. [ERW1]		
<b>Other environmental control measures additional to above</b>		
None [ATE16]		
<b>Section 3</b>		<b>Exposure Estimation</b>
<b>3.1. Health</b>		
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]		
<b>3.2. Environment</b>		
Used ECETOC TRA model. [EE1]		
<b>Section 4</b>		<b>Guidance to check compliance with the Exposure Scenario</b>
<b>4.1. Health</b>		
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. [G23]		
<b>4.2. Environment</b>		
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 ( <a href="http://cefic.org/en/reach-for-industries-libraries.html">http://cefic.org/en/reach-for-industries-libraries.html</a> ) [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 <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a> [ATG02]		



ATIEL/ATC Use Group F (prof) - Generic Exposure Scenario based on Boundary Conditions	
<b>Section 1</b>	
<b>Exposure Scenario Title</b>	
Title	<b>Use of lubricants in high energy open processes [ATU05] - Professional [G27]</b>
Use Descriptor	Professional (SU22) PROC1, PROC2, PROC8a, PROC17, PROC18 Environmental Release Categories: ERC8a Specific Environmental Release Categories: ATIEL-ATC SPERC 8.Fp.v1
Processes, tasks, activities covered	Covers use of lubricants in high energy open processes, e.g. In high speed machinery such as metal rolling/forming or metal working fluids for machining and grinding. Includes associated product storage, material transfers, sampling and maintenance activities. [ATU10]
<b>Section 2</b>	
<b>Operational conditions and risk management measures</b>	
<b>Section 2.1</b>	
<b>Control of worker exposure</b>	
<b>Product characteristics</b>	
Physical form of product	Liquid, vapour pressure < 0.5 kPa [OC3].
Concentration of substance in product	Covers use of substance/product up to 100% (unless stated differently) [ATG01]
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20°C above ambient, unless stated differently [G15] Assumes a good basic standard of occupational hygiene is implemented [G1].
<b>Contributing Scenarios</b>	
<b>Risk Management Measures</b> <i>Note: list RMM standard phrases according to the control hierarchy indicated in the ECHA template: 1. Technical measures to prevent release, 2. Technical measures to prevent dispersion, 3. Organisational measures, 4. Personal protection.</i>	
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]
Filling / preparation of equipment from drums or containers. [CS45]. PROC8a	Avoid carrying out activities involving exposure for more than 1 hour [OC27]
Metal machining operations [CS79]; PROC17	Provide extract ventilation to points where emissions occur [E54].
Operation and lubrication of high energy open equipment [CS17]. PROC17, PROC18	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 4 hours [OC28] Or [G9] Wear a respirator conforming to EN140 with Type A filter or better. [PPE22] Wear chemically resistant gloves (tested to EN374) in combination with specific activity training [PPE17].
Equipment cleaning and maintenance [CS39]. PROC8a	Drain down system prior to equipment break-in or maintenance [E65]. Provide a good standard of general ventilation. Natural ventilation is from windows and doors etc. Controlled ventilation means air is supplied or removed by a powered fan. [E1]. Avoid carrying out activities involving exposure for more than 4 hours [OC28]. Or [G9] Wear a respirator conforming to EN140 with Type A filter or better [PPE22] Retain drain downs in sealed storage pending disposal or for subsequent recycle [ENVT4].
Storage [CS67] PROC1, PROC2	Store substance within a closed system. [E84]
<b>Section 2.2</b>	
<b>Control of environmental exposure</b>	
<b>Amounts used</b>	
EU tonnage (tonnes per year) [ATE09]	<i>insert value from Environmental GES values table</i>
Fraction of EU tonnage used in region [A1]	0.1
Fraction of Regional tonnage used locally [A3]	0.1
<b>Frequency and duration of use</b>	
Emission days (days/year) [FD4]	365
<b>Environmental factors not influenced by risk management</b>	
Local freshwater dilution factor [EF1]	10
Local marine water dilution factor [EF2]	100
<b>Other given operational conditions affecting environmental exposure</b>	
Water-based (oil in water emulsion) or straight oil (contains no water) process. [ATE10]	
Release fraction to air from process (after typical onsite RMMs) [ATE11]	<i>insert value from Environmental GES values table</i>
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant) [ATE12]	1.00E-03
Release fraction to soil from process (after typical onsite RMMs) [ATE13]	1.00E-03
<b>Technical conditions and measures at process level (source) to prevent release</b>	
Common practices vary across sites thus conservative process release estimates used [TCS1]	
<b>Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>	
Prevent discharge of undissolved substance to or recover from onsite wastewater. [TCR14]	
<b>Organisational measures to prevent/limit release from site</b>	
Do not apply industrial sludge to natural soils [OMS2].	
Sludge should be incinerated, contained or reclaimed [OMS3].	
<b>Conditions and measures related to municipal sewage treatment plant</b>	

<b>Section 2.2</b>	<b>Control of environmental exposure</b>
Estimated substance removal from wastewater via domestic sewage treatment (%) - F <sub>STP</sub> [STP3]	<i>insert value from Environmental GES values table</i>
Assumed domestic sewage treatment plant flow (m <sup>3</sup> /d) [STP5]	2.00E+03
Maximum allowable site quantity (MSafe) based on OCs and RMMs as above (kg/day): [ATE15]	<i>insert value from Environmental GES values table</i>
<b>Conditions and measures related to external treatment of waste for disposal</b>	
External treatment and disposal of waste should comply with applicable local and/or national regulations. [ETW3].	
<b>Conditions and measures related to external recovery of waste</b>	
External recovery and recycling of waste should comply with applicable local and/or national regulations. [ERW1]	
<b>Other environmental control measures additional to above</b>	
None [ATE16]	
<b>Section 3</b>	<b>Exposure Estimation</b>
<b>3.1. Health</b>	
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]	
<b>3.2. Environment</b>	
Used ECETOC TRA model. [EE1]	
<b>Section 4</b>	<b>Guidance to check compliance with the Exposure Scenario</b>
<b>4.1. Health</b>	
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. [G23]	
<b>4.2. Environment</b>	
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 ( <a href="http://cefic.org/en/reach-for-industries-libraries.html">http://cefic.org/en/reach-for-industries-libraries.html</a> ) [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 <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a> [ATG02]	