CHEMICAL SAFETY REPORT

Part B

Kerosines

Prepared by: CONCAWE

9. EXPOSURE ASSESSMENT

Table 9.1: Identified Use Description and Exposure Scenario Number Key

IU	Category	Identified Use	Sector	ES Number	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Article Category (AC)	Environmental Release Category (ERC)	Specific Environmental Release Category (SpERC)
1	Kerosine	01 – Manufacture of Substance	Industrial	ES 9.1.1	3, 8, 9	NA	1, 2, 3, 4, 8a, 8b, 15	NA	1, 4	ESVOC SpERC 1.1.v1
2	Kerosine	01b – Use of Substance as Intermediate	Industrial	ES 9.2.1	3, 8, 9	NA	1, 2, 3, 4, 8a, 8b, 15	NA	6a	ESVOC SpERC 6.1a.v1
3	Kerosine	01a – Distribution of Substance	Industrial	ES 9.3.1	3	NA	1, 2, 3, 4, 8a, 8b, 9, 15	NA	1, 2, 3, 4, 5, 6a, 6b, 6c, 6d, 7	ESVOC SpERC 1.1b.v1
4	Kerosine	02 – Formulation & (Re)packing of Substances and Mixtures	Industrial	ES 9.4.1	3, 10	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15	NA	2	ESVOC SpERC 2.2.v1
5	Kerosine	03a – Uses in Coatings: Industrial	Industrial	ES 9.5.1	3	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 10, 13, 15	NA	4	ESVOC SpERC 4.3a.v1
6	Kerosine	03b – Uses in Coatings: Professional	Professional	ES 9.6.1	22	NA	1, 2, 3, 4, 5, 8a, 8b, 10, 11, 13, 15, 19	NA	8a, 8d	ESVOC SpERC 8.3b.v1
7	Kerosine	03c – Uses in Coatings: Consumer	Consumer	ES 9.7.1	21	1, 4, 5, 9a, 9b, 9c, 10, 15, 18, 23, 24, 31, 34	NA	NA	8a, 8d	ESVOC SpERC 8.3c.v1

8	Kerosine	04a – Use in Cleaning Agents: Industrial	Industrial	ES 9.8.1	3	NA	1, 2, 3, 4, 7, 8a, 8b, 10, 13	NA	4	ESVOC SpERC 4.4a.v1
9	Kerosine	04b – Use in Cleaning Agents: Professional	Professional	ES 9.9.1	22	NA	1, 2, 3, 4, 8a, 8b, 10, 11, 13	NA	8a, 8d	ESVOC SpERC 8.4b.v1
10	Kerosine	04c – Use in Cleaning Agents: Consumer	Consumer	ES 9.10.1	21	3, 4, 9a, 24, 35, 38	NA	NA	8a, 8d	ESVOC SpERC 8.4c.v1
11	Kerosine	06a – Lubricants: Industrial	Industrial	ES 9.11.1	3	NA	1, 2, 3, 4, 7, 8a, 8b, 9, 10, 13, 17, 18	NA	4, 7	ESVOC SpERC 4.6a.v1
12	Kerosine	06b – Lubricants: Professional (Low Release)	Professional	ES 9.12.1	22	NA	1, 2, 3, 4, 8a, 8b, 9, 10, 11, 13, 17, 18, 20	NA	9a, 9b	ESVOC SpERC 9.6b.v1
13	Kerosine	06c – Lubricants: Professional (High Release)	Professional	ES 9.13.1	22	NA	1, 2, 3, 4, 8a, 8b, 9, 10, 11, 13, 17, 18, 20	NA	8a, 8d	ESVOC SpERC 8.6c.v1
14	Kerosine	06d – Lubricants: Consumer (Low Release)	Consumer	ES 9.14.1	21	1, 6, 24, 31	NA	NA	9a, 9b	ESVOC SpERC 9.6d.v1
15	Kerosine	06e – Lubricants: Consumer (High Release)	Consumer	ES 9.15.1	21	1, 6, 24, 31	NA	NA	8a, 8d	ESVOC SpERC 8.6e.v1
16	Kerosine	07a – Use in Metal Working Fluids / Rolling Oils: Industrial	Industrial	ES 9.16.1	3	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 17	NA	4	ESVOC SpERC 4.7a.v1
17	Kerosine	07b – Use in Metal working fluids / rolling oils: Professional	Professional	ES 9.17.1	22	NA	1, 2, 3, 5, 8a, 8b, 9, 10, 11, 13, 17	NA	8a, 8d	ESVOC SpERC 8.7c.v1

Kerosines

18	Kerosine	10a – Use as Release Agents or Binders: Industrial	Industrial	ES 9.18.1	3	NA	1, 2, 3, 4, 6, 7, 8b, 10, 13, 14	NA	4	ESVOC SpERC 4.10a.v1
19	Kerosine	10b – Use as Release Agents or Binders: Professional	Professional	ES 9.19.1	22	NA	1, 2, 3, 4, 6, 8a, 8b, 10, 11, 14	NA	8a, 8d	ESVOC SpERC 8.10b.v1
20	Kerosine	11a – Use in Agrochemicals: Professional	Professional	ES 9.20.1	22	NA	1, 2, 4, 8a, 8b, 11, 13	NA	8a, 8d	ESVOC SpERC 8.11a.v1
21	Kerosine	11b – Use in Agrochemicals: Consumer	Consumer	ES 9.21.1	21	12, 22, 27	NA	NA	8a, 8d	ESVOC SpERC 8.11b.v1
22	Kerosine	12a – Use as a Fuel: Industrial	Industrial	ES 9.22.1	3	NA	1, 2, 3, 8a, 8b, 16	NA	7	ESVOC SpERC 7.12a.v1
23	Kerosine	12b – Use as a Fuel: Professional	Professional	ES 9.23.1	22	NA	1, 2, 3, 8a, 8b, 16	NA	9a, 9b	ESVOC SpERC 9.12b.v1
24	Kerosine	12c – Use as a Fuel: Consumer	Consumer	ES 9.24.1	21	13	NA	NA	9a, 9b	ESVOC SpERC 9.12c.v1
25	Kerosine	13a – Use as Functional Fluids: Industrial	Industrial	ES 9.25.1	3	NA	1, 2, 3, 4, 8a, 8b, 9	NA	7	ESVOC SpERC 7.13a.v1
26	Kerosine	15 – Use in Road and Construction Applications: Professional	Professional	ES 9.26.1	22	NA	8a, 8b, 9, 10, 11, 13	NA	8d, 8f	ESVOC SpERC 8.15.v1
27	Kerosine	18b – Explosives Manufacture & Use: Professional	Professional	ES 9.27.1	22	NA	1, 3, 5, 8a, 8b	NA	8e	ERC DEFINED RELEASE FRACTIONS

The process of mapping uses and characterising risks has often identified a series of supporting measures that may further contribute to the management of exposure. The measures are identified in *blue* text in the Appendices contained in section 10. These measures are not contained within the Exposure Scenarios (ES) as they do not need to be implemented in order to achieve satisfactory exposure control. However, they are identified within the CSA in order that stakeholders are able to benefit from access to other exposure control information that has been obtained during the process of CSA/ES development.

9.1 Manufacture of Kerosine- Industrial

9.1.1 Exposure Scenario

Section 1 Exposure Scena						
Section 1 Exposure Scena	ario litie Kerosine					
Title						
Manufacture of Substance						
-	Use Descriptor					
Sector(s) of Use		3, 8, 9				
Process Categories		1, 2, 3, 4, 8a, 8b, 15				
		Further information on the mapping and allocation of				
En in an atal Dala a Oata		PROC codes is contained in Table 9.1				
Environmental Release Cate		1, 4				
Specific Environmental Rele	• •	ESVOC SpERC 1.1.v1				
Processes, tasks, activitie						
		ess chemical or extraction agent. Includes recycling /				
		associated laboratory activities, maintenance and				
loading (including marine ve	ssel/barge, road/rai	l car and bulk container).				
Assessment Method						
See Section 3.						
Section 2 Operational con	ditions and risk m	nanagement measures				
	-					
Section 2.1 Control of wor	rker exposure					
Product characteristics						
Physical form of product	Liquid					
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .				
Concentration of substance		e substance in the product up to 100 % (unless stated				
in product	differently) G13					
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2				
use/exposure		d autot al alegate d la superior (b. 2000) alegate angli auto				
Other Operational		d out at elevated temperature (> 20°C above ambient				
Conditions affecting		7. Assumes a good basic standard of occupational				
exposure	hygiene is impleme					
Contributing Scenarios	Specific Risk Mar	nagement Measures and Operating Conditions				
General measures (skin	Avoid direct skin co	ontact with product. Identify potential areas for indirect				
irritants) G19	skin contact. Wear	gloves (tested to EN374) if hand contact with				
		Clean up contamination/spills as soon as they occur.				
		amination immediately. Provide basic employee				
		/ minimise exposures and to report any skin effects				
	that may develop.					
CS15 General exposures	No other specific n	neasures identified. EI20				
(closed systems)	N I a still an an a still a st					
CS16 General exposures	ino other specific n	neasures identified. EI20				
(open systems) CS14 Bulk transfers	No other energific measures identified 500					
	No other specific measures identified. El20					
CS2 Process sampling	No other specific measures identified. El20					
CS36 Laboratory activities	No other specific measures identified. El20					
CS39 Equipment cleaning	No other specific measures identified. El20					
and maintenance						
	No other specific measures identified. El20					
		llocation of the identified OCs and RMMs is				
contained in Appendices 1	to 3					
Section 2.2 Control of env	rironmental expos	ure				
	-					

Product characteristics	
Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a	1
Amounts used].
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	5.4e6
Fraction of Regional tonnage used locally	0.11
Annual site tonnage (tonnes/year)	6.0e5
Maximum daily site tonnage (kg/day)	2.0e6
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	300
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposur	e
Release fraction to air from process (initial release prior to RMM)	1.0e-2
Release fraction to wastewater from process (initial release prior to	3.0e-4
RMM)	
Release fraction to soil from process (initial release prior to RMM)	0.0001
Technical conditions and measures at process level (source) to pre-	vent release
Common practices vary across sites thus conservative process release e	
Technical onsite conditions and measures to reduce or limit dischar	
releases to soil	
Risk from environmental exposure is driven by freshwater sediment [TCF	.1b].
Prevent discharge of undissolved substance to or recover from onsite wa	stewater [TCR14].
Onsite wastewater treatment required [TCR13].	
Treat air emission to provide a typical removal efficiency of (%)	90
Treat onsite wastewater (prior to receiving water discharge) to provide	97.7
the required removal efficiency \geq (%)	
If discharging to domestic sewage treatment plant, provide the required	56.1
onsite wastewater removal efficiency of \geq (%)	
Organisation measures to prevent/limit release from site	incincrated contained or
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be reclaimed [OMS3].	incinerated, contained of
IConditions and moscuros rolated to municipal sowage treatment pla	nt
Conditions and measures related to municipal sewage treatment pla	int
Estimated substance removal from wastewater via domestic sewage	94.7
Estimated substance removal from wastewater via domestic sewage treatment (%)	94.7
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite	
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	94.7 97.7
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	94.7
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total	94.7 97.7
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d)	94.7 97.7 2.0e6 10000
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for	94.7 97.7 2.0e6 10000
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for During manufacturing no waste of the substance is generated [ETW4].	94.7 97.7 2.0e6 10000
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for During manufacturing no waste of the substance is generated [ETW4]. Conditions and measures related to external recovery of waste	94.7 97.7 2.0e6 10000
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for During manufacturing no waste of the substance is generated [ETW4]. Conditions and measures related to external recovery of waste During manufacturing no waste of the substance is generated [ERW2].	94.7 97.7 2.0e6 10000 disposal
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for During manufacturing no waste of the substance is generated [ETW4]. Conditions and measures related to external recovery of waste During manufacturing no waste of the substance is generated [ERW2]. Additional information on the basis for the allocation of the indentifi	94.7 97.7 2.0e6 10000 disposal
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for During manufacturing no waste of the substance is generated [ETW4]. Conditions and measures related to external recovery of waste During manufacturing no waste of the substance is generated [ERW2]. Additional information on the basis for the allocation of the indentific contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	94.7 97.7 2.0e6 10000 disposal
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for During manufacturing no waste of the substance is generated [ETW4]. Conditions and measures related to external recovery of waste During manufacturing no waste of the substance is generated [ERW2]. Additional information on the basis for the allocation of the indentif	94.7 97.7 2.0e6 10000 disposal
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for During manufacturing no waste of the substance is generated [ETW4]. Conditions and measures related to external recovery of waste During manufacturing no waste of the substance is generated [ERW2]. Additional information on the basis for the allocation of the indentific contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works Section 3 Exposure Estimation 3.1. Health	94.7 97.7 2.0e6 10000 disposal
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for During manufacturing no waste of the substance is generated [ETW4]. Conditions and measures related to external recovery of waste During manufacturing no waste of the substance is generated [ERW2]. Additional information on the basis for the allocation of the indentific contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works .	94.7 97.7 2.0e6 10000 disposal
Estimated substance removal from wastewater via domestic sewage treatment (%) Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) Conditions and measures related to external treatment of waste for During manufacturing no waste of the substance is generated [ETW4]. Conditions and measures related to external recovery of waste During manufacturing no waste of the substance is generated [ERW2]. Additional information on the basis for the allocation of the indentifi contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works Section 3 Exposure Estimation 3.1. Health The ECETOC TRA tool has been used to estimate workplace exposures	94.7 97.7 2.0e6 10000 disposal

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4]. Scaled assessments for EU refineries have been performed using site-specific data and are attached in Petrorisk file in IUCLID Section 13 – "Site-Specific Production" worksheet [DSU6].

9.1.2 Exposure Estimation

9.1.2.1 Human Health

See Appendix 2.a and 2.b.

9.1.2.2 Environment

9.2 Use of Kerosine as Intermediate – Industrial

9.2.1 Exposure Scenario

Section 1 Exposure Scena						
Title						
Use of Substance as Intermediate						
Use Descriptor	•					
Sector(s) of Use		3, 8, 9				
Process Categories		1, 2, 3, 4, 8a, 8b, 15 Further information on the mapping and allocation of				
Environmental Delegas Cate	aorioo	PROC codes is contained in Table 9.1				
Environmental Release Cate Specific Environmental Rele		6a ESVOC SpERC 6.1a.v1				
Processes, tasks, activities	<u> </u>	ESVOC SPERC 0. Ta.VI				
Use of substance as an inter contained systems. Includes storage, sampling, associate vessel/barge, road/rail car an	mediate (not relate incidental exposur d laboratory activiti	d to strictly controlled conditions) within closed or es during recycling/ recovery, material transfers, es, maintenance and loading (including marine				
Assessment Method						
See Section 3.						
Section 2 Operational con	ditions and risk m	nanagement measures				
Section 2.1 Control of wor	kor ovnosuro					
Product characteristics						
Physical form of product	Liquid					
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .				
Concentration of substance		e substance in the product up to 100 % (unless stated				
in product	differently) G13					
Frequency and duration of use/exposure		sures up to 8 hours (unless stated differently) G2				
Other Operational Conditions affecting exposure		ed out at elevated temperature (> 20°C above ambient 7. Assumes a good basic standard of occupational				
Contributing Scenarios		agement Measures and Operating Conditions				
General measures (skin irritants) <mark>G19</mark>	skin contact. Wear substance likely. C Wash off skin cont training to prevent that may develop.					
CS15 General exposures (closed systems)		neasures identified. El20				
CS16 General exposures (open systems)	No other specific measures identified. El20					
CS14 Bulk transfers	No other specific measures identified. El20					
CS2 Process sampling	No other specific measures identified. EI20					
CS36 Laboratory activities	No other specific measures identified. EI20					
CS39 Equipment cleaning and maintenance	No other specific measures identified. EI20					
	No other specific n	No other specific measures identified. EI20				
Additional information on to contained in Appendices 1		llocation of the identified OCs and RMMs is				

Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a]].
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	1.8e5
Fraction of Regional tonnage used locally	8.3e-2
Annual site tonnage (tonnes/year)	1.5e4
Maximum daily site tonnage (kg/day)	5.0e4
Frequency and duration of use	5.0e4
Continuous release [FD2].	200
Emission days (days/year)	300
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposur	е
Deleges for the statement of the stateme	4.0- 2
Release fraction to air from process (initial release prior to RMM)	1.0e-3
Release fraction to wastewater from process (initial release prior to RMM)	3.0e-4
Release fraction to soil from process (initial release prior to RMM)	0.001
Technical conditions and measures at process level (source) to prev	vent release
Common practices vary across sites thus conservative process release e	stimates used [TCS1].
Technical onsite conditions and measures to reduce or limit dischar	
releases to soil	-
Risk from environmental exposure is driven by freshwater sediment [TCR	(1b].
Prevent discharge of undissolved substance to or recover from onsite wa	
If discharging to domestic sewage treatment plant, no onsite wastewater	
Treat air emission to provide a typical removal efficiency of (%)	80
Treat onsite wastewater (prior to receiving water discharge) to provide	81.4
the required removal efficiency \geq (%)	
If discharging to domestic sewage treatment plant, provide the required	0
onsite wastewater removal efficiency of \geq (%)	
Organisation measures to prevent/limit release from site	incinerated contained or
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be reclaimed [OMS3].	incinerated, contained or
Conditions and measures related to municipal sewage treatment pla	nt
Conditions and measures related to municipal sewage treatment pla	
Estimated substance removal from wastewater via domestic sewage	94.7
treatment (%)	54.7
Total efficiency of removal from wastewater after onsite and offsite	94.7
(domestic treatment plant) RMMs (%)	o
	1.8e5
wastewater treatment removal (kg/d)	
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	disposal
This substance is consumed during use and no waste of the substance is	
Conditions and measures related to external recovery of waste	- • •
This substance is consumed during use and no waste of the substance is	generated [FRW3]
Additional information on the basis for the allocation of the indentifi	
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures	unless otherwise indicated.
G21.	

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.2.2 Exposure Estimation

9.2.2.1 Human Health

See Appendix 2.a and 2.b.

9.2.2.2 Environment

9.3 Distribution of Kerosine– Industrial

9.3.1 Exposure Scenario

Section 1 Exposure Scena					
Title					
Distribution of Substance					
Use Descriptor					
Sector(s) of Use		3			
Process Categories		1, 2, 3, 4, 8a, 8b, 9, 15			
		Further information on the mapping and allocation of			
		PROC codes is contained in Table 9.1			
Environmental Release Cate		1, 2, 3, 4, 5, 6a, 6b, 6c, 6d, 7			
Specific Environmental Rele		ESVOC SpERC 1.1b.v1			
Processes, tasks, activitie					
		I/road car and IBC loading) and repacking (including			
		its sampling, storage, unloading, maintenance and			
associated laboratory activit	es.				
Assessment Method					
See Section 3.					
Section 2.1 Control of wor	rker exposure				
Product characteristics					
Physical form of product	Liquid				
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. OC4.			
Concentration of substance		e substance in the product up to 100 % (unless stated			
in product	differently) G13				
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2			
use/exposure					
Other Operational		ot more than 20°C above ambient temperatures, unless			
Conditions affecting		G15. Assumes a good basic standard of occupational			
exposure	hygiene is impleme				
Contributing Scenarios	Specific Risk Mar	nagement Measures and Operating Conditions			
General measures (skin	Avoid direct skin c	ontact with product. Identify potential areas for indirect			
irritants) G19	skin contact. Wear	gloves (tested to EN374) if hand contact with			
		lean up contamination/spills as soon as they occur.			
		amination immediately. Provide basic employee			
		/ minimise exposures and to report any skin effects			
	that may develop.				
CS15 General exposures	No other specific n	neasures identified. EI20			
(closed systems)					
CS16 General exposures	No other specific n	neasures identified. EI20			
(open systems)	Nie otherware 10				
CS2 Process sampling		neasures identified. El20			
CS36 Laboratory activities		neasures identified. El20			
CS14 Bulk transfers	No other specific measures identified. El20				
CS6 Drum and small	No other specific measures identified. El20				
package filling	S39 Equipment cleaning No other specific measures identified. El20				
and maintenance					
CS85 Bulk Product Storage No other specific measures identified. EI20					
Additional information on the basis for the allocation of the identified OCs and RMMs is					
contained in Appendices					
Section 2.2 Control of env		lire			
	nonnentai exp0s				
Product characteristics					

Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a	ı].	
Amounts used		
Fraction of EU tonnage used in region	0.1	
Regional use tonnage (tonnes/year)	5.4e6	
Fraction of Regional tonnage used locally	2.0e-3	
Annual site tonnage (tonnes/year)	1.1e4	
Maximum daily site tonnage (kg/day)	3.6e4	
Frequency and duration of use	5.004	
Continuous release [FD2].		
Emission days (days/year)	300	
Environmental factors not influenced by risk management	500	
Local freshwater dilution factor	10	
Local marine water dilution factor	100	
Other given operational conditions affecting environmental exposur	re	
Release fraction to air from process (initial release prior to RMM)	1.0e-3	
Release fraction to wastewater from process (initial release prior to	1.0e-5	
RMM) Release fraction to soil from process (initial release prior to RMM)	0.00001	
Technical conditions and measures at process level (source) to pre-		
Common practices vary across sites thus conservative process release e		
Technical onsite conditions and measures to reduce or limit dischar		
releases to soil		
Risk from environmental exposure is driven by freshwater [TCR1a].		
No wastewater treatment required [TCR6].		
Treat air emission to provide a typical removal efficiency of (%)	90	
Treat onsite wastewater (prior to receiving water discharge) to provide	0	
the required removal efficiency \geq (%)		
If discharging to domestic sewage treatment plant, provide the required	0	
onsite wastewater removal efficiency of \geq (%)		
Organisation measures to prevent/limit release from site		
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be reclaimed [OMS3].	incinerated, contained or	
Conditions and measures related to municipal sewage treatment pla	ant	
Conditions and measures related to municipal sewage treatment pro		
Estimated substance removal from wastewater via domestic sewage	94.7	
treatment (%)	04.7	
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	94.7	
Maximum allowable site tonnage (M _{Safe}) based on release following total	2.6e6	
wastewater treatment removal (kg/d)		
Assumed domestic sewage treatment plant flow (m ³ /d)	2000	
Conditions and measures related to external treatment of waste for	disposal	
External treatment and disposal of waste should comply with applicable I	ocal and/or national	
regulations [ETW3].		
Conditions and measures related to external recovery of waste		
External recovery and recycling of waste should comply with applicable lo	ocal and/or national	
regulations [ERW1].		
Additional information on the basis for the allocation of the indentif		
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works Section 3 Exposure Estimation		
3.1. Health		
The ECETOC TRA tool has been used to estimate workplace exposures	unless otherwise indicated	
G21.		
3.2. Environment		
The Hydrocarbon Block Method has been used to calculate environmenta	al exposure with the Petrorisk	
	a. expectate that are reactionsk	

model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario 4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.3.2 Exposure Estimation

9.3.2.1 Human Health

See Appendix 2.a and 2.b.

9.3.2.2 Environment

9.4 Formulation & (Re)packing of Kerosine– Industrial

9.4.1 Exposure Scenario

Section 1 Exposure Scene					
Section 1 Exposure Scenario Title Kerosine Title					
	f Substansas and	Mixturee			
Formulation & (Re)packing of	or Substances and	wixtures			
Use Descriptor					
Sector(s) of Use		3, 10			
Process Categories		1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15			
		Further information on the mapping and allocation of			
		PROC codes is contained in Table 9.1			
Environmental Release Cate					
Specific Environmental Rele		ESVOC SpERC 2.2.v1			
Processes, tasks, activitie					
		stance and its mixtures in batch or continuous			
		rs, mixing, tabletting, compression, pelletisation,			
	cale packing, main	tenance, sampling and associated laboratory activities			
Assessment Method					
See Section 3.					
Section 2 Operational con	ditions and risk m	nanagement measures			
Section 2.1 Control of wor	rker exposure				
Product characteristics					
Physical form of product	Liquid				
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. OC4.			
		e substance in the product up to 100 % (unless stated			
in product	differently) G13				
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2			
use/exposure	A	ot more than 20°C above ambient temperatures, unless			
Other Operational		G15. Assumes a good basic standard of occupational			
Conditions affecting exposure	hygiene is implem				
Contributing Scenarios		nagement Measures and Operating Conditions			
Contributing Scenarios	Specific Risk wa	agement measures and operating conditions			
General measures (skin		ontact with product. Identify potential areas for indirect			
irritants) G19		gloves (tested to EN374) if hand contact with			
		Clean up contamination/spills as soon as they occur.			
		ntamination immediately. Provide basic employee			
		/ minimise exposures and to report any skin effects			
	that may develop.	E3			
CS15 General exposures	No other specific n	neasures identified. El20			
(closed systems)					
CS16 General exposures	No other specific r	neasures identified. El20			
	open systems) CS2 Process sampling No other specific measures identified. El20				
CS2 Process sampling					
CS36 Laboratory activities CS14 Bulk transfers		neasures identified. EI20			
		neasures identified. EI20			
CS30 mixing operations No other specific measures identified. EI20					
CS34 Manual / CS22 No other specific measures identified. EI20					
Transfer from/pouring from					
containers.					
CS8 Drum/batch transfers	No other specific r	neasures identified. EI20			
CS100 Tabletting,					
CS100 Tabletting, No other specific measures identified. EI20					

Pelefisation No other specific measures identified. EI20 SS Drum and small No other specific measures identified. EI20 SS Equipment cleaning No other specific measures identified. EI20 Additional information on the basis for the allocation of the identified OCs and RMMs is contained in Appendices 1 to 3 Section 2.2 Control of environmental exposure Product characteristics Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a]. Mounts used Traction of EU tonnage used in region Intervent discussion Section 2.2 Control of environmental exposure Product characteristics Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a]. Mounts used Traction of Regional tonnage used locally S.8.e-3 Annual site tonnage (tonnes/year) S.0.e4 Aaximum daily site tonnage (tonge (yday) I.0.e5 Trequency and duration of use Continuous release [FD2]. Trivoronmental factors not influenced by risk management Cocal freshwater dilution factor Cocal marine water dilution factor Cocal freshwater dilution factor Cocal freshwater dilution factor Cocal freshwater dilution factor Cocal freshwater from process (after typical onsite RMMs of 2.0.e-4 CMM) Release fraction to soil from process (initial release prior to Cocal freshwater from process (initial release prior to Cocal freshwater from process (initial release prior to Consistent with EU Solvent Emissions Directive requirements) Release fraction to soil from process (initial release prior to Consistent with EU Solvent Emissions Directive requirements) Continuo practices vary across sites thus conservative process release estimates used [TCS1]. Frevent discharge of undisolved substance to or recover from onsite waterwater [TCR1]. Frevent discharge of undisolved substance to or recover from onsite watewater [TCR1]. Frevent discharge of undisolved substance to or recover from onsite watewater [TCR1]. Frevent discharge of undisolved substance to or recover from onsite watewater [TCR1]. Frevent discharge of undisolved substance to or recover from onsite watewater [TCR1].		l					
SS Drum and small No other specific measures identified. EI20 S39 Equipment cleaning No other specific measures identified. EI20 S39 Equipment cleaning No other specific measures identified. EI20 S36 Buk Product Storage No other specific measures identified. EI20 S36 Suk Product Storage No other specific measures identified. CCs and RMMs is contained in Appendices 1 to 3 Section 2.2 Control of environmental exposure Product characteristics Vibustance is complex UVCB (PrC3). Predominantly hydrophobic (PrC4a). Mounts used Traction of EU tonnage used in region 0.1 Regional use tonnage (tonnes/year) 5.2e6 Traction of Regional tonnage used locally 5.8e-3 Nunual site tonnage (tonnes/year) 3.0e4 Ataximum daity site tonnage (kg/day) 1.0e5 Toritnous release [FD2]. Toritnous release [FD2]. Ervironmental factors not influenced by risk management 000 Ocal freshwater dilution factor 10 Ocal freshwater dilution factor 1.0e-2 Oral freshwater from process (initial release prior to RMM) 0.0001 Vehr yee operational conditions affecting environmental exposure 1.0e-2 Sonistent with EU Solvent Ernissions Directive requirements)	compression, extrusion or						
Beckage filling No other specific measures identified. E120 S39 Equipment cleaning No other specific measures identified. E120 S38 Ebuk Product Storage No other specific measures identified. E120 S38 Eduk Product Storage No other specific measures identified. E120 S38 Eduk Product Storage No other specific measures identified. E120 Storation of environmental exposure Product characteristics Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a]. Mounts used Fraction of EU tonnage used in region 0.1 Regional use fonnage (tonnes/year) 5.2e6 Fraction of Edugation for the allocally 5.8e-3 Vinual site tonnage (tonnes/year) 3.0e4 Aaximum daily site tonnage (kg/day) 1.0e5 Frequency and duration of use 000 Continuous release [FD2] 300 Environmental factors not influenced by risk management 100 cocal marine water dilution factor 10 cocal marine water dilution factor 100 Consister water dilution factor 2.0e-4 MM) 0.0001 Technical conditions and measures to reduce or limit discharges, air emissions							
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Estimated substance removal from wastewater via domestic sewage 94.7 reatment (%) Total efficiency of removal from wastewater after onsite and offsite 94.7 domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total 2.6e5 vastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d) 2000 Conditions and measures related to external treatment of waste for disposal	reclaimed [OMS3].						
reatment (%)	Conditions and measures	related to municipal sewage treatment pla	ant				
reatment (%)			0.4.7				
Total efficiency of removal from wastewater after onsite and offsite 94.7 domestic treatment plant) RMMs (%) 94.7 Maximum allowable site tonnage (M _{Safe}) based on release following total 2.6e5 vastewater treatment removal (kg/d) 2000 Assumed domestic sewage treatment plant flow (m³/d) 2000 Conditions and measures related to external treatment of waste for disposal		al from wastewater via domestic sewage	94.7				
domestic treatment plant) RMMs (%) Aaximum allowable site tonnage (M _{Safe}) based on release following total 2.6e5 vastewater treatment removal (kg/d) 2000 Assumed domestic sewage treatment plant flow (m³/d) 2000 Conditions and measures related to external treatment of waste for disposal		om wastowator ofter engite and offeite	04.7				
Maximum allowable site tonnage (M _{Safe}) based on release following total vastewater treatment removal (kg/d) 2.6e5 Assumed domestic sewage treatment plant flow (m³/d) 2000 Conditions and measures related to external treatment of waste for disposal							
vastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m³/d) Conditions and measures related to external treatment of waste for disposal							
Assumed domestic sewage treatment plant flow (m³/d) 2000 Conditions and measures related to external treatment of waste for disposal			2.000				
Conditions and measures related to external treatment of waste for disposal			2000				

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].

Additional information on the basis for the allocation of the indentified OCs and RMMs is contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" worksheet.

Section 3 Exposure Estimation

3.1. Health

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. G21.

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. <u>G23</u>.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.4.2 Exposure Estimation

9.4.2.1 Human Health

See Appendix 2.a and 2.b.

9.4.2.2 Environment

9.5 Uses of Kerosine in Coatings – Industrial

9.5.1 Exposure Scenario

Section 1 Exposure Scenario Title Kerosine					
Title					
Uses in Coatings					
Use Descriptor					
Sector(s) of Use		3			
Process Categories		1, 2, 3, 4, 5, 7, 8a, 8b, 10, 13, 15			
		Further information on the mapping and allocation of			
Environmental Delegas Cat	aorioo	PROC codes is contained in Table 9.1			
Environmental Release Cate Specific Environmental Rele		4 ESVOC SpERC 4.3a.v1			
	0,	E3V0C SpERC 4.3a.VI			
Processes, tasks, activitie		vez, etc) including, evenerures during use (including			
		ves, etc) including exposures during use (including sfer from bulk and semi-bulk, application by spray,			
		uction lines and film formation) and equipment			
cleaning, maintenance and a					
Assessment Method					
See Section 3.					
Section 2 Operational con	ditions and risk m	nanagement measures			
Section 2.1 Control of wor	rker exposure				
Product characteristics					
Physical form of product	Liquid				
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. OC4.			
Concentration of substance		e substance in the product up to 100 % (unless stated			
in product	differently) G13				
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2			
use/exposure		<u>^</u>			
Other Operational		ot more than 20°C above ambient temperatures, unless			
Conditions affecting		G15. Assumes a good basic standard of occupational			
exposure	hygiene is impleme				
Contributing Scenarios	Specific Risk Mar	nagement Measures and Operating Conditions			
General measures (skin	Avoid direct skin c	ontact with product. Identify potential areas for indirect			
irritants) G19		gloves (tested to EN374) if hand contact with			
,		Clean up contamination/spills as soon as they occur.			
	Wash off skin cont	amination immediately. Provide basic employee			
		/ minimise exposures and to report any skin effects			
	that may develop.				
		on measures such as impervious suits and face shields			
	, .	uring high dispersion activities which are likely to lead			
	to substantial aero	osol release e.g. spraying. E4.			
CS15 General exposures	No other specific n	neasures identified. EI20			
(closed systems)	N				
CS99 Film formation - force	No other specific n	neasures identified. El20			
rying, stoving and other					
echnologies. S29 Mixing operations No other specific measures identified. EI20					
(closed systems).	No other specific measures identified. El20				
CS95 Film formation - air	No other specific n	neasures identified. El20			
drying.					
CS66 Preparation of	No other specific n	neasures identified. FI20			
S66 Preparation of No other specific measures identified. EI20					

material for application.		
CS30 Mixing operations		
(open systems)		
CS97 Spraying	No other specific measures identified. EI20	
(automatic/robotic).		
CS10 Spraying, CS34	No other specific measures identified. EI20	
Manual		
CS3 Material transfers,	No other specific measures identified. El20	
CS81 Dedicated facility		
CS3 Material transfers,	No other specific measures identified. El20	
CS82 Non-Dedicated		
facility		
CS98 Roller, spreader, flow	No other specific measures identified. EI20	
application. CS4 Dipping, immersion	No other specific measures identified. EI20	
and pouring.		
CS36 Laboratory activities	No other specific measures identified. EI20	
CS39 Equipment cleaning	No other specific measures identified. EI20	
and maintenance		
CS67 Storage, CS137	No other specific measures identified. EI20	
Product sampling.		
Additional information on	the basis for the allocation of the identifie	ed OCs and RMMs is
contained in Appendices		
Section 2.2 Control of env	vironmental exposure	
Product characteristics		
Substance is complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4a	ı].
Amounts used		
Fraction of EU tonnage used	d in region	0.1
Regional use tonnage (tonn	es/year)	9.8e2
Fraction of Regional tonnage	e used locally	1
Annual site tonnage (tonnes	/year)	9.8e2
Maximum daily site tonnage		4.9e4
Frequency and duration of		
Continuous release [FD2].		
Emission days (days/year)		20
	influenced by risk management	•
Local freshwater dilution fac	tor	10
Local marine water dilution f		100
Other given operational co	onditions affecting environmental exposu	re
Release fraction to air from	process (initial release prior to RMM)	0.98
Release fraction to wastewa RMM)	ter from process (initial release prior to	7.0e-4
	process (initial release prior to RMM)	0
Technical conditions and	measures at process level (source) to pre	vent release
Common practices vary acro	oss sites thus conservative process release e	estimates used [TCS1].
	is and measures to reduce or limit discha	
	oosure is driven by freshwater sediment [TCF	R1b].
	olved substance to or recover from onsite wa	
If discharging to domestic se	ewage treatment plant, no onsite wastewater	treatment required [TCR9].
	e a typical removal efficiency of (%)	90
	or to receiving water discharge) to provide	91.8
the required removal efficier	$1CV \ge (\%)$	

1	
If discharging to domestic sewage treatment plant, provide the required	0
onsite wastewater removal efficiency of \geq (%)	
Organisation measures to prevent/limit release from site	incinerated contained or
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be reclaimed [OMS3].	
Conditions and measures related to municipal sewage treatment pla	int
Estimated substance removal from wastewater via domestic sewage treatment (%)	94.7
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	94.7
Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d)	7.5e4
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	disposal
External treatment and disposal of waste should comply with applicable lo regulations [ETW3].	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable lo regulations [ERW1].	ocal and/or national
Additional information on the basis for the allocation of the indentifi	ed OCs and RMMs is
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	heet.
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures G21.	unless otherwise indicated.
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmenta model [EE2].	al exposure with the Petrorisk
Section 4 Guidance to check compliance with the Exposure Scenar	io
4.1. Health	
Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. Ga	
Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi G38.	
Where other Risk Management Measures/Operational Conditions are addensure that risks are managed to at least equivalent levels. G23.	opted, then users should
4.2. Environment	
Guidance is based on assumed operating conditions which may not be ap scaling may be necessary to define appropriate site-specific risk manage Required removal efficiency for wastewater can be achieved using onsite alone or in combination [DSU2]. Required removal efficiency for air can be technologies, either alone or in combination [DSU3]. Further details on se technologies are provided in SpERC factsheet (http://cefic.org/en/reach-fe	ment measures [DSU1]. /offsite technologies, either be achieved using onsite caling and control

9.5.2 Exposure Estimation

9.5.2.1 Human Health

See Appendix 2.a and 2.b.

9.5.2.2 Environment

9.6 Uses of Kerosine in Coatings – Professional

Section 1 Exposure Scenario Title Kerosine Title Uses in Coatings Use Descriptor Sector(s) of Use 22 Process Categories 1, 2, 3, 4, 5, 8a, 8b, 10, 11, 13, 15, 19 Further information on the mapping and allocation of PROC codes is contained in Table 9.1 Environmental Release Categories 8a, 8d Specific Environmental Release Category ESVOC SpERC 8.3b.v1 Processes, tasks, activities covered Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods, and film formation), and equipment cleaning, maintenance and associated laboratory activities. Assessment Method See Section 3. Section 2 Operational conditions and risk management measures Section 2.1 Control of worker exposure Product characteristics Physical form of product Liquid Vapour pressure (kPa) Liquid, vapour pressure 0.5 - 10 kPa at STP. OC4. Concentration of substance Covers percentage substance in the product up to 100 % (unless stated differently) G13 in product Frequency and duration of Covers daily exposures up to 8 hours (unless stated differently) G2 use/exposure Other Operational Assumes use at not more than 20°C above ambient temperatures, unless Conditions affecting stated differently. G15. Assumes a good basic standard of occupational exposure hygiene is implemented G1 **Contributing Scenarios** Specific Risk Management Measures and Operating Conditions Avoid direct skin contact with product. Identify potential areas for indirect General measures (skin irritants) G19 skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects 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 CS15 General exposures No other specific measures identified. El20 (closed systems) CS38 Use in contained systems CS15 General exposures No other specific measures identified. EI20 (closed systems) CS56 With sample collection CS38 Use in contained svstems CS8 Drum/Batch transfers No other specific measures identified. EI20

9.6.1 Exposure Scenario

	No other specific measures identified. EI20
equipment (from drums or	
containers).	
CS96 Preparation of	No other specific measures identified. El20
material for application.	
CS29 Mixing operations	
(closed systems)	
CS95 Film formation - air	No other specific measures identified. EI20
drying.	
OC9 Outdoor.	
CS96 Preparation of	No other specific measures identified. El20
material for application.	
Indoor OC8.	
CS66 Preparation of	No other specific measures identified. El20
material for application.	
CS30 Mixing operations	
(open systems).	
CS9 Pouring from small	
containers.	
OC8 Indoor.	
CS66 Preparation of	No other specific measures identified. El20
material for application.	·
CS30 Mixing operations	
(open systems).	
CS9 Pouring from small	
containers.	
OC Outdoor.	
CS3 Material transfers.	No other specific measures identified. EI20
CS8 Pumped Drum/batch	
transfers. CS82 Non-	
dedicated facility	
CS3 Material transfers.	No other specific measures identified. El20
CS8 Pumped Drum/batch	
transfers. CS81 Dedicated	
facility	
CS3 Material transfers.	No other specific measures identified. EI20
CS8 Pumped Drum/batch	
transfers.	
	No other specific measures identified. EI20
application.	
OC8 Indoor.	
	No other specific measures identified. EI20
application.	
OC9 Outdoor.	
CS68 Manual spraying.	No other specific measures identified. EI20
OC8 Indoor.	
CS10 Spraying, CS34	No other specific measures identified. EI20
Manual, OC8 indoor.	
CS4 Dipping, immersion	No other specific measures identified. EI20
and pouring.	
OC8 Indoor.	
CS4 Dipping, immersion	No other specific measures identified. EI20
and pouring.	
OC9 Outdoor.	
	No other specific measures identified E120
CS36 Laboratory activities	No other specific measures identified. EI20
CS72 Hand application -	No other specific measures identified. El20
finger paints, pastels,	
adhesives	
OC8 Indoor.	

CS72 Hand application -	No other specific measures identified. EI20	
fingerpaints, pastels, adhesives		
OC9 outdoor.		
CS39 Equipment cleaning	No other specific measures identified. EI20	
and maintenance		
CS67 Storage, CS137	No other specific measures identified. EI20	
Product sampling		
	the basis for the allocation of the identifie	ed OCs and RMMs is
contained in Appendices		
Section 2.2 Control of env	vironmental exposure	
Product characteristics		
Substance is complex UVC	3 [PrC3]. Predominantly hydrophobic [PrC4a].
Amounts used		-
Fraction of EU tonnage used	d in region	0.1
Regional use tonnage (tonnes/year)		2.1e2
Fraction of Regional tonnage		5.0e-4
Annual site tonnage (tonnes		1.0e-1
Maximum daily site tonnage		2.8e-1
Frequency and duration o	fuse	
Continuous release [FD2].		0.05
Emission days (days/year)		365
	influenced by risk management	
Local freshwater dilution fac		10
Local marine water dilution f		100
Other given operational co	onditions affecting environmental exposu	re
	wide dispersive use (regional only)	0.98
Release fraction to wastewa	ter from wide dispersive use	0.01
Release fraction to soil from	wide dispersive use (regional only)	0.01
	measures at process level (source) to pre	vent release
	oss sites thus conservative process release e	
	is and measures to reduce or limit discha	
releases to soil		goo, cc
	oosure is driven by freshwater [TCR1a].	
No wastewater treatment re		
Treat air emission to provide	e a typical removal efficiency of (%)	N/A
Treat onsite wastewater (pri	or to receiving water discharge) to provide	0
the required removal efficier	ncy ≥ (%)	
	ewage treatment plant, provide the required	0
onsite wastewater removal e		
	prevent/limit release from site	
Do not apply industrial sludg reclaimed [OMS3].	je to natural soils [OMS2]. Sludge should be	incinerated, contained or
Conditions and measures	related to municipal sewage treatment pla	ant
Estimated substance remov	al from wastewater via domestic sewage	94.7
treatment (%)		
	rom wastewater after onsite and offsite	94.7
(domestic treatment plant) F		
	nage (M _{Safe}) based on release following total	3.6e1
wastewater treatment remov	/al (kg/d)	
Assumed domestic sewage	treatment plant flow (m ³ /d)	2000
Conditions and measures	related to external treatment of waste for	disposal
	osal of waste should comply with applicable I	-
· · ·		

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].

Additional information on the basis for the allocation of the indentified OCs and RMMs is contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" worksheet.

Section 3 Exposure Estimation

3.1. Health

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. G21.

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.6.2 Exposure Estimation

9.6.2.1 Human Health

See Appendix 2.a and 2.b.

9.6.2.2 Environment

9.7 Uses in Coatings – Consumer

	sure Scena		
	posure Scena	ario Title	
Title			
Uses in Coatin	ngs		
Use Descript	or		
Sector(s) of U	se		21
Product Cate			1, 4, 5, 9a, 9b, 9c, 10, 15, 18, 23, 24, 31, 34
i iouuot outog	jonice		Further information on the mapping and allocation of
			PC codes is contained in Table 1.
Environmenta	I Release Cate	aories	8a, 8d
	onmental Rele		ESVOC SpERC 8.3c.v1
	asks, activitie		was stal including averaging during use (including
			ves, etc) including exposures during use (including
		ation, application by	brush, spray by hand or similar methods) and
equipment cle Assessment			
See Section 3			
Section 2 Op	perational con	ditions and risk n	nanagement measures
		sumer exposure	
Product char			
Physical form	of product	Liquid	
Vapour press			ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .
Concentration	of substance	Unless otherwise s	stated, cover concentrations up to 100% [ConsOC1]
in product			
Amounts used	ł	Unless otherwise	stated, covers use amounts up to13800g [ConsOC2];
		covers skin contac	t area up to 857.5cm2 [ConsOC5]
Frequency an	d duration of	Unless otherwise	stated, covers use frequency up to 1 times per day
use/exposure		[ConsOC4]; covers	s exposure up to 6 hours per event [ConsOC14]
Other Operati	onal	Unless otherwise s	stated assumes use at ambient temperatures
Conditions aff			mes use in a 20 m ³ room [ConsOC11]; assumes use
exposure	-	with typical ventila	tion [ConsOC8].
Product Cate	gory	Specific Risk Mar	nagement Measures and Operating Conditions
		Liniana athanwina a	atatad aquara concentrations up to 200/ [ConcOC1]
PC1:Adhesiv			stated, covers concentrations up to 30% [ConsOC1];
es, sealants			10 days/year[ConsOC3]; covers use up to 1 time/on
Glues, hobby			C4]; covers skin contact area up to 35.73 cm2
use			ch use event, covers use amounts up to 9g [ConsOC2];
			typical household ventilation [ConsOC8]; covers use in
			[ConsOC11]; for each use event, covers exposure up
		to 4.00hr/event[Co	
	RMM	No specific Rivinis	identified beyond those OCs stated [ConsRMM15]
PC1:Adhesiv	OC	Unless otherwise s	stated, covers concentrations up to 30% [ConsOC1];
es, sealants		covers use up to 1	days/year[ConsOC3]; covers use up to 1 time/on day
Glues DIY-			covers skin contact area up to 110.00 cm2 [ConsOC5];
use (carpet			t, covers use amounts up to 6390g [ConsOC2]; covers
glue, tile			nousehold ventilation [ConsOC8]; covers use in room
glue, wood		-	SOC11]; for each use event, covers exposure up to
parquet glue)		6.00hr/event[Cons	
	RMM	No specific RMMs	identified beyond those OCs stated [ConsRMM15]
DC1.Adhaais	00	Liniose otherwise r	etated covers concentrations up to 200/ [ConcOC4]:
PC1:Adhesiv			stated, covers concentrations up to 30% [ConsOC1];
es, sealants Glue from			days/year[ConsOC3]; covers use up to 1 time/on day covers skin contact area up to 35.73 cm2 [ConsOC5];
		UI USE[CUIISOC4];	COVERS SMIT CONTACT ATEA UP TO 30.73 CITIZ [CONSOLD];

9.7.1 Exposure Scenario

spray		for each use event, covers use amounts up to 85.05g [ConsOC2]; covers
opray		use under typical household ventilation [ConsOC8]; covers use in room
		size of 20m3[ConsOC11]; for each use event, covers exposure up to
		4.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC1:Adhesiv	OC	Unless otherwise stated, covers concentrations up to 30% [ConsOC1];
es, sealants		covers use up to 55 days/year[ConsOC3]; covers use up to 1 time/on day
Sealants		of use[ConsOC4]; covers skin contact area up to 35.73 cm2 [ConsOC5];
		for each use event, covers use amounts up to 75g [ConsOC2]; covers
		use under typical household ventilation [ConsOC8]; covers use in room
		size of 20m3[ConsOC11]; for each use event, covers exposure up to
		1.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4_n:Anti-	OC	Unless otherwise stated, covers concentrations up to 1% [ConsOC1];
freeze and		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
de-icing		day of use[ConsOC4]; for each use event, covers use amounts up to 0.5g
products		[ConsOC2]; Covers use in a one car garage (34m3) under typical
Washing car		ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for
window		each use event, covers exposure up to 0.02hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4_n:Anti-	ос	Unless otherwise stated, covers concentrations up to 10% [ConsOC1];
freeze and		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
de-icing		day of use[ConsOC4]; covers skin contact area up to 428.00 cm2
products		[ConsOC5]; for each use event, covers use amounts up to 2000g
Pouring into radiator		[ConsOC2]; Covers use in a one car garage (34m3) under typical ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for
raulator		each use event, covers exposure up to 0.17hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4 n:Anti-		Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
freeze and	00	covers use up to 110 days/year[ConsOC3]; covers use up to 1 time/on
de-icing		day of use[ConsOC4]; covers skin contact area up to 36.00 cm2
products		[ConsOC5]; for each use event, covers use amounts up to 4g [ConsOC2];
Lock de-icer		Covers use in a one car garage (34m3) under typical ventilation
		[ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use
		event, covers exposure up to 0.25hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC5_n	OC	Unless otherwise stated, covers concentrations up to 30% [ConsOC1];
Artists supply		covers use up to 110 days/year[ConsOC3]; covers use up to 1 time/on
and hobby		day of use[ConsOC4]; covers skin contact area up to 35.73 cm2
preparations		[ConsOC5]; for each use event, covers use amounts up to 9g [ConsOC2];
		covers use under typical household ventilation [ConsOC8]; covers use in
		room size of 20m3[ConsOC11]; for each use event, covers exposure up
		to 4.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC9a:Coatin	OC	Unless otherwise stated, covers concentrations up to 5% [ConsOC1];
gs and		covers use up to 4 days/year[ConsOC3]; covers use up to 1 time/on day
paints, fillers		of use[ConsOC4]; covers skin contact area up to 428.75 cm2 [ConsOC5];
putties,		for each use event, covers use amounts up to 2760g [ConsOC2]; covers
thinners		use under typical household ventilation [ConsOC8]; covers use in room
Waterborne		size of 20m3[ConsOC11]; for each use event, covers exposure up to
latex wall		2.20hr/event[ConsOC14];
paint	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC9a:Coatin	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
gs and		covers use up to 6 days/year[ConsOC3]; covers use up to 1 time/on day
paints, fillers		of use[ConsOC4]; covers skin contact area up to 428.75 cm2 [ConsOC5];
putties,		for each use event, covers use amounts up to 744g [ConsOC2]; covers
thinners		use under typical household ventilation [ConsOC8]; covers use in room
Solvent rich,		size of 20m3[ConsOC11]; for each use event, covers exposure up to

high solid,		2.20hr/event[ConsOC14];
water borne paint	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC9a:Coatin gs and paints, fillers putties, thinners Aerosol	oc	Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 2 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; for each use event, covers use amounts up to 215g [ConsOC2]; Covers use in a one car garage (34m3) under typical ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.33hr/event[ConsOC14];
spray can	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC9a:Coatin gs and paints, fillers putties, thinners Removers (paint-, glue-,	oc	Unless otherwise stated, covers concentrations up to 90% [ConsOC1]; covers use up to 3 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 857.50 cm2 [ConsOC5]; for each use event, covers use amounts up to 491g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 2.00hr/event[ConsOC14];
wall paper-, sealant- remover)	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC9b:Fillers, putties, plasters, modelling clayFillers and putty	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1]; covers use up to 12 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 35.73 cm2 [ConsOC5]; for each use event, covers use amounts up to 85g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 4.00br/event/ConsOC14];
	RMM	4.00hr/event[ConsOC14]; No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC9b:Fillers, putties, plasters, modelling clayPlasters and floor equalizers	OC	Unless otherwise stated, covers concentrations up to 3% [ConsOC1]; covers use up to 12 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 857.50 cm2 [ConsOC5]; for each use event, covers use amounts up to 13800g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 2.00hr/event[ConsOC14];
DOOLE	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC9b:Fillers, putties, plasters, modelling clay	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1]; covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 254.40 cm2 [ConsOC5]; for each use event, assumes swallowed amount of 1g [ConsOC13];
Modelling clay	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC9c:Finger paints Finger paints	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1]; covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 254.40 cm2 [ConsOC5]; for each use event, assumes swallowed amount of 1.35g [ConsOC13];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC10_n building & construction preparations	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 6 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 428.75 cm2 [ConsOC5]; for each use event, covers use amounts up to 744g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to

M15] sOC1]; e/on day onsOC5];]; covers n room up to M15] sOC1]; e/on day onsOC5]; covers n room up to
sOC1]; e/on day onsOC5];]; covers n room up to M15] sOC1]; e/on day onsOC5]; covers n room
e/on day onsOC5];]; covers n room up to M15] M15] sOC1]; e/on day onsOC5]; covers n room
onsOC5];]; covers n room up to M15] sOC1]; sOC1]; covers n room
]; covers n room up to M15] sOC1]; e/on day onsOC5]; covers n room
n room up to M15] sOC1]; e/on day onsOC5]; covers n room
M15] M15] sOC1]; e/on day onsOC5]; covers n room
M15] sOC1]; e/on day onsOC5]; covers n room
sOC1]; e/on day onsOC5]; covers n room
sOC1]; e/on day onsOC5]; covers n room
e/on day onsOC5]; covers n room
e/on day onsOC5]; covers n room
onsOC5]; covers n room
covers n room
n room
M15]
-
SOC1];
e/on day
o 215g
)C11]; for
];
M15]
sOC1];
e/on day
onsOC5];
covers
n room
up to
•
M15]
0041
sOC1];
me/on
0.001
sOC8];
t, covers
M15]
sOC1];
ne/on day
onsOC5];
covers
n room
up to
M15]

shoes)		
PC23_n: Leather tanning, dye, finishing, impregnation and care products Polishes, aprov	OC RMM	Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 8 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 430.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 56g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.33hr/event[ConsOC14]; No specific RMMs identified beyond those OCs stated [ConsRMM15]
spray (furniture, shoes)		
PC24: Lubricants, greases, and release products Liquids	OC	Unless otherwise stated, covers concentrations up to 100% [ConsOC1]; covers use up to 4 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 468.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 2200g [ConsOC2]; Covers use in a one car garage (34m3) under typical ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.17hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC24: Lubricants, greases, and release products	OC	Unless otherwise stated, covers concentrations up to 20% [ConsOC1]; covers use up to 10 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 468.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 34g [ConsOC2]; covers use in room size of m3[ConsOC11];
Pastes	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC24: Lubricants, greases, and release products Sprays	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 6 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 428.75 cm2 [ConsOC5]; for each use event, covers use amounts up to 73g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.17hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC31:Polishe s and wax blends Polishes, wax / cream (floor, furniture,	OC	Unless otherwise stated, covers concentrations up to 15% [ConsOC1]; covers use up to 29 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 430.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 142g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 1.23hr/event[ConsOC14];
shoes)	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC31:Polishe s and wax blends Polishes, spray (furniture, shoes)		Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 8 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 430.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 35g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.33hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC34_n: Textile dyes, finishing and impregnating products	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1]; covers use up to 55 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 857.50 cm2 [ConsOC5]; for each use event, covers use amounts up to 115g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room

	OC11]; for each use event, covers exposure up to
1.00hr/event[Con	
	identified beyond those OCs stated [ConsRMM15]
Additional information on the basis for the contained in Appendices 1 to 3	llocation of the identified OCs and RMMs is
Section 2.2 Control of environmental expos	Jre
Product characteristics	
Substance is complex UVCB [PrC3]. Predomi	antly hydrophobic [PrC4a]
Amounts used	
	0.1
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	2.1e2
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	1.0e-1
Maximum daily site tonnage (kg/day)	2.8e-1
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	365
Environmental factors not influenced by ris	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting	environmental exposure
Release fraction to air from wide dispersive us	(regional only) 0.99
Release fraction to wastewater from wide disp	rsive use 0.01
Release fraction to soil from wide dispersive us	e (regional only) 0.005
Conditions and measures related to munici	
Risk from environmental exposure is driven by	
Estimated substance removal from wastewate	
treatment (%)	
Maximum allowable site tonnage (M _{Safe}) based wastewater treatment removal (kg/d)	on release following total 3.6e1
Assumed domestic sewage treatment plant flo	(m ³ /d) 2000
Conditions and measures related to externa	treatment of waste for disposal
External treatment and disposal of waste shou regulations [ETW3].	l comply with applicable local and/or national
Conditions and measures related to externa	recovery of waste
External recovery and recycling of waste shou regulations [ERW1].	comply with applicable local and/or national
	llocation of the indentified OCs and RMMs is
contained in Petrorisk file in IUCLID Section	
Section 3 Exposure Estimation	
3.1. Health	
	ate consumer exposures, consistent with the content of
	he IR&CSA TGD. Where exposure determinants diffe
to these sources, then they are indicated.	
3.2. Environment	to coloulate environmental expedure with the Detrorial
model [EE2].	to calculate environmental exposure with the Petrorisl
Section 4 Guidance to check compliance w	th the Exposure Scenario
4.1. Health	
Predicted exposures are not expected to excer operational conditions/risk management meas	d the applicable consumer reference values when the res given in section 2 are implemented. G39.
Where other Risk Management Measures/Ope	ational Conditions are adopted, then users should
ensure that risks are managed to at least equiv	

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].

9.7.2 Exposure Estimation

9.7.2.1 Human Health

See Appendix 2.c.

9.7.2.2 Environment

9.8 Use of Kerosine in Cleaning Agents – Industrial

Section 1 Exposure Scenario Title Kerosine Title Use in Cleaning Agents Use Descriptor Sector(s) of Use 3 Process Categories 1, 2, 3, 4, 7, 8a, 8b, 10, 13 Further information on the mapping and allocation of PROC codes is contained in Table 9.1 Environmental Release Categories 4 Specific Environmental Release Category ESVOC SpERC 4.4a.v1 Processes, tasks, activities covered Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers. Exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance. Assessment Method See Section 3. Section 2 Operational conditions and risk management measures Section 2.1 Control of worker exposure Product characteristics Physical form of product Liquid Vapour pressure (kPa) Liquid, vapour pressure 0.5 - 10 kPa at STP. OC4. Concentration of substance Covers percentage substance in the product up to 100 % (unless stated differently) G13 in product Frequency and duration of Covers daily exposures up to 8 hours (unless stated differently) G2 use/exposure Other Operational Assumes use at not more than 20°C above ambient temperatures, unless Conditions affecting stated differently. G15. Assumes a good basic standard of occupational exposure hygiene is implemented G1 **Contributing Scenarios** Specific Risk Management Measures and Operating Conditions Avoid direct skin contact with product. Identify potential areas for indirect General measures (skin irritant) G19 skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects 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 CS15 General exposures No other specific measures identified. EI20 (closed systems) CS14 Bulk transfers No other specific measures identified. EI20 CS93 Automated process No other specific measures identified. El20 with (semi) closed system, CS38 Use in contained systems CS93 Automated process No other specific measures identified. El20 with (semi) closed system, CS38 Use in contained

9.8.1 Exposure Scenario

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systems. CS8 Drum / batch		
transfers.		
CS101 Application of	No other specific measures identified. EI20	
cleaning products in closed		
systems.		
	No other specific measures identified. EI20	
equipment (from drums or		
containers), CS81		
Dedicated facilities.		
CS37 Use in contained	No other specific measures identified. EI20	
batch processes / CS76		
Semi Automated process.		
(e.g.: Semi automatic		
application of floor care and		
maintenance products)	No other apositio measures identified E120	
CS4 Dipping, immersion	No other specific measures identified. EI20	
and pouring CS42 Cleaning with low-	No other specific measures identified. EI20	
pressure washers	ino other specific measures identified. Eizo	
CS44 Cleaning with high	No other specific measures identified. EI20	
pressure washers		
CS34 Manual / CS47	No other specific measures identified. EI20	
Cleaning / CS48 Surfaces /		
CS60 No spraying		
CS39 Equipment cleaning	No other specific measures identified. EI20	
and maintenance		
CS67 Storage, CS137	No other specific measures identified. EI20	
Product sampling		
	the basis for the allocation of the identifi	ed OCs and RMMs is
contained in Appendices	1 to 3	
Section 2.2 Control of env	vironmental exposure	
	nonnental exposure	
Product characteristics		
Product characteristics	3 [PrC3]. Predominantly hydrophobic [PrC4	a].
Product characteristics		a].
Product characteristics Substance is complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4	a]. 0.1
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used	3 [PrC3]. Predominantly hydrophobic [PrC4	-
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage)	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year)	0.1 3.1e4
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage	3 [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally	0.1 3.1e4 3.2e-3
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes	3 [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year)	0.1 3.1e4 3.2e-3 1.0e2
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day)	0.1 3.1e4 3.2e-3
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnes Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day)	0.1 3.1e4 3.2e-3 1.0e2
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2].	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day)	0.1 3.1e4 3.2e-3 1.0e2 5.0e3
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year)	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use	0.1 3.1e4 3.2e-3 1.0e2
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management	0.1 3.1e4 3.2e-3 1.0e2 5.0e3
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnes Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor actor	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac Local marine water dilution fac	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor actor onditions affecting environmental exposu	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100 IIII
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnes Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac Local marine water dilution fac Local marine water dilution fac Conter given operational contered Release fraction to air from	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor actor onditions affecting environmental exposu	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnes Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac Local marine water dilution fac Local marine water dilution fac Conter given operational contered Release fraction to air from	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor actor onditions affecting environmental exposu	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100 IIII
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac Local marine water dilution fac Local marine water dilution fac Release fraction to air from Release fraction to wastewa RMM)	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor actor onditions affecting environmental exposu	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100 Ire
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac Local marine water dilution fac Local marine water dilution fac Release fraction to air from Release fraction to wastewa RMM) Release fraction to soil from Technical conditions and	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor actor onditions affecting environmental exposu process (initial release prior to RMM) ter from process (initial release prior to RMM) measures at process level (source) to process (on the second se	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100 1re 1.0 3.0e-6 0 event release
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnes Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac Local marine water dilution fac Local marine water dilution fac Release fraction to air from Release fraction to air from Release fraction to soil from Technical conditions and Common practices vary acro	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor actor onditions affecting environmental exposu process (initial release prior to RMM) ter from process (initial release prior to RMM) measures at process level (source) to process sites thus conservative process release	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100 ire 1.0 3.0e-6 0 event release estimates used [TCS1].
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnes Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac Local marine water dilution fac Local marine water dilution fac Release fraction to air from Release fraction to air from Release fraction to soil from Technical conditions and Common practices vary acro	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor actor onditions affecting environmental exposu process (initial release prior to RMM) ter from process (initial release prior to RMM) measures at process level (source) to process (on the second se	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100 ire 1.0 3.0e-6 0 event release estimates used [TCS1].
Product characteristics Substance is complex UVCE Amounts used Fraction of EU tonnage used Regional use tonnage (tonnage Fraction of Regional tonnage Annual site tonnage (tonnes Maximum daily site tonnage Frequency and duration of Continuous release [FD2]. Emission days (days/year) Environmental factors not Local freshwater dilution fac Local marine water dilution fac Local marine water dilution fac Release fraction to air from Release fraction to soil from Release fraction to soil from Technical conditions and Common practices vary acro	B [PrC3]. Predominantly hydrophobic [PrC4 d in region es/year) e used locally /year) (kg/day) f use influenced by risk management tor actor onditions affecting environmental exposu process (initial release prior to RMM) ter from process (initial release prior to RMM) measures at process level (source) to process sites thus conservative process release	0.1 3.1e4 3.2e-3 1.0e2 5.0e3 20 10 100 ire 1.0 3.0e-6 0 event release estimates used [TCS1].

Prevent discharge of undissolved substance to or recover from onsite wa	astewater [TCR14].
No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	70
Treat onsite wastewater (prior to receiving water discharge) to provide	0
the required removal efficiency \geq (%)	
If discharging to domestic sewage treatment plant, provide the required	0
onsite wastewater removal efficiency of \geq (%)	
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be reclaimed [OMS3].	e incinerated, contained or
Conditions and measures related to municipal sewage treatment pl	ant
Estimated substance removal from wastewater via domestic sewage	94.7
treatment (%)	0-11
Total efficiency of removal from wastewater after onsite and offsite	94.7
(domestic treatment plant) RMMs (%)	•
Maximum allowable site tonnage (M _{safe}) based on release following total	6.3e5
wastewater treatment removal (kg/d)	
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	
External treatment and disposal of waste should comply with applicable	
regulations [ETW3].	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable	ocal and/or national
regulations [ERW1].	
Additional information on the basis for the allocation of the indentiti	fied OCs and RMMs is
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	sheet.
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures G21.	s unless otherwise indicated.
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmen	tal exposure with the Petrorisk
The Hydrocarbon Block Method has been used to calculate environmen model [EE2].	•
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena	•
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health	rio
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena	rio irritant effects. G32. Risk
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis	rio irritant effects. G32. Risk 37. hed for other health effects.
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G	rio irritant effects. G32. Risk 37. hed for other health effects.
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis G36. Users are advised to consider national Occupational Exposure Lim	rio irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values.
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis G36. Users are advised to consider national Occupational Exposure Lim G38.	rio irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values.
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis G36. Users are advised to consider national Occupational Exposure Lim G38. Where other Risk Management Measures/Operational Conditions are advised to consider national Conditions are advised to consider Neuroperational Conditional Conditions are advised to consider Neuroperational Conditional Condi	rio irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values.
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis G36. Users are advised to consider national Occupational Exposure Lim G38. Where other Risk Management Measures/Operational Conditions are ac 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 a	rio irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values. lopted, then users should
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis G36. Users are advised to consider national Occupational Exposure Lim G38. Where other Risk Management Measures/Operational Conditions are ac 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 a scaling may be necessary to define appropriate site-specific risk manage	rio irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values. dopted, then users should applicable to all sites; thus, ement measures [DSU1].
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis G36. Users are advised to consider national Occupational Exposure Lim G38. Where other Risk Management Measures/Operational Conditions are ac 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 a scaling may be necessary to define appropriate site-specific risk manage Required removal efficiency for wastewater can be achieved using onsite	rio irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values. dopted, then users should applicable to all sites; thus, ement measures [DSU1]. e/offsite technologies, either
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis G36. Users are advised to consider national Occupational Exposure Lim G38. Where other Risk Management Measures/Operational Conditions are ac 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 a scaling may be necessary to define appropriate site-specific risk manage Required removal efficiency for wastewater can be achieved using onsit alone or in combination [DSU2]. Required removal efficiency for air can	rio irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values. dopted, then users should applicable to all sites; thus, ement measures [DSU1]. e/offsite technologies, either be achieved using onsite
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis G36. Users are advised to consider national Occupational Exposure Lim G38. Where other Risk Management Measures/Operational Conditions are ac 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 a scaling may be necessary to define appropriate site-specific risk manage Required removal efficiency for wastewater can be achieved using onsit alone or in combination [DSU2]. Required removal efficiency for air can technologies, either alone or in combination [DSU3]. Further details on s	rio irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values. dopted, then users should applicable to all sites; thus, ement measures [DSU1]. e/offsite technologies, either be achieved using onsite scaling and control
The Hydrocarbon Block Method has been used to calculate environment model [EE2]. Section 4 Guidance to check compliance with the Exposure Scena 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establis G36. Users are advised to consider national Occupational Exposure Lim G38. Where other Risk Management Measures/Operational Conditions are ac 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 a scaling may be necessary to define appropriate site-specific risk manage Required removal efficiency for wastewater can be achieved using onsit alone or in combination [DSU2]. Required removal efficiency for air can	rio irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values. dopted, then users should applicable to all sites; thus, ement measures [DSU1]. e/offsite technologies, either be achieved using onsite scaling and control

9.8.2 Exposure Estimation

9.8.2.1 Human Health

See Appendix 2.a and 2.b.

9.8.2.2 Environment

9.9 Use of Kerosine in Cleaning Agents – Professional

9.9.1 Exposure Scenario

Section 1 Exposure Scon			
Section 1 Exposure Scenario Title Kerosine Title			
Use in Cleaning Agents			
Use Descriptor			
Sector(s) of Use		22	
Process Categories		1, 2, 3, 4, 8a, 8b, 10, 11, 13	
		Further information on the mapping and allocation of	
		PROC codes is contained in Table 9.1	
Environmental Release Cate		8a, 8d	
Specific Environmental Rele	• •	ESVOC SpERC 8.4b.v1	
Processes, tasks, activitie			
		ducts including pouring/unloading from drums or	
		g in the preparatory phase and cleaning activities	
(including spraying, brushing) , dipping, wiping aι	utomated and by hand).	
Assessment Method			
See Section 3.			
Section 2 Operational con	ditions and risk m	nanagement measures	
Section 2.1 Control of wor	ker exposure		
Product characteristics	•		
Physical form of product	Liquid		
Vapour pressure (kPa)	Liquid, vapour pres	ssure 0.5 - 10 kPa at STP. OC4.	
		e substance in the product up to 100 % (unless stated	
in product	differently) G13		
· ·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2	
use/exposure	,		
Other Operational	Assumes use at no	ot more than 20°C above ambient temperatures, unless	
Conditions affecting		G15. Assumes a good basic standard of occupational	
exposure	hygiene is impleme		
Contributing Scenarios		nagement Measures and Operating Conditions	
3 • • • • • •		· · · · · · · · · · · · · · · · · · ·	
General measures (skin		ontact with product. Identify potential areas for indirect	
irritant) <mark>G19</mark>		gloves (tested to EN374) if hand contact with	
		Clean up contamination/spills as soon as they occur.	
		amination immediately. Provide basic employee	
		/ minimise exposures and to report any skin effects	
	that may develop.		
		on measures such as impervious suits and face shields	
	may be required during high dispersion activities which are likely to lead		
		sol release e.g. spraying. E4.	
	No other specific measures identified. El20		
equipment (from drums or			
containers), CS82 Non-			
dedicated facilities CS45 Filling / preparation of No other specific measures identified. EI20			
	No other specific n	neasures identified. EI20	
equipment (from drums or			
containers)., CS81			
Dedicated facilities			

	No other specific measures identified. EI20
equipment (from drums or	
containers)., CS55 Batch	
Process	
CS37 Use in contained	No other specific measures identified. EI20
batch processes, CS76	
Semi Automated process.	
(e.g.: Semi automatic	
application of floor care and	
maintenance products).	
CS93 Automated process	No other specific measures identified. EI20
with (semi) closed systems,	
CS38 Use in contained	
systems	
CS93 Automated process	No other specific measures identified. El20
with (semi) closed systems,	
CS38 Use in contained	
systems, CS8 Drum/batch	
transfers.	
CS37 Use in contained	No other specific measures identified. EI20
batch processes, CS76	
Semi Automated process	
(e.g: Semi automatic	
application of floor care and	
maintenance products)	
CS34 Manual / CS47	No other specific measures identified. El20
Cleaning / CS48 Surfaces /	
CS4 Dipping, immersion	
and pouring	
CS42 Cleaning with low-	No other specific measures identified. EI20
pressure washers / CS51	
Rolling, Brushing / CS60 no	
spraying	
CS44 Cleaning with high	No other specific measures identified. EI20
pressure washers, CS10	
Spraying, OC8 Indoor.	
CS34 Manual, CS47	No other specific measures identified. El20
Cleaning, CS50 Wiping,	
CS51 Rolling, brushing,	
CS10 Spraying, CS48	
surfaces,	
CS41 Degreasing small	No other specific measures identified. El20
objects in cleaning station /	
CS27 Ad hoc manual	
application via trigger	
sprays, dipping, etc. /	
CS50 Wiping / CS51	
Rolling, Brushing	
CS41 Degreasing small	No other specific measures identified. EI20
objects in cleaning station,	
CS27 Ad-hoc manual	
application via trigger	
sprays, dipping etc, CS50	
Wiping / CS51 Rolling,	
brushing.	
CS46 Large surfaces,	No other specific measures identified. El20
CS44 Cleaning with high	
pressure washers, CS10	

Spraying, OC8 Indoor					
CS101 Application of					
cleaning products in closed					
systems, CS9 Outdoor					
CS74 Cleaning of medical	No other specific measures identified. El20				
devices					
CS39 Equipment cleaning	No other specific measures identified. EI20				
and maintenance.					
CS67 Storage, C137 with	No other specific measures identified. EI20				
occasional controlled					
exposure					
	the basis for the allocation of the identifie	ed OCs and RMMs is			
contained in Appendices					
Section 2.2 Control of env	vironmental exposure				
Product characteristics					
Substance is complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4a	a].			
Amounts used					
Fraction of EU tonnage used	d in region	0.1			
Regional use tonnage (tones	<u> </u>	4.5e3			
Fraction of Regional tonnage	2 /	1			
Annual site tonnage (tonnes		2.2			
Maximum daily site tonnage		6.1			
Frequency and duration of		0:1			
Continuous release [FD2].	use				
		265			
Emission days (days/year)	influenced by risk management	365			
Local freshwater dilution fac		10			
Local marine water dilution f		100			
Other given operational co	onditions affecting environmental exposu	re			
Release fraction to air from	wide dispersive use (regional only)	0.02			
	ter from wide dispersive use	0.000001			
		0			
Release fraction to soil from wide dispersive use (regional only) 0 Technical conditions and measures at process level (source) to prevent release					
	oss sites thus conservative process release e				
	is and measures to reduce or limit discha				
releases to soil		rges, an emissions and			
	oosure is driven by freshwater [TCR1a].				
No secondary wastewater tr					
	e a typical removal efficiency of (%)	N/A			
	or to receiving water discharge) to provide	0			
	the required removal efficiency \geq (%)				
If discharging to domestic se	0				
onsite wastewater removal e					
Organisation measures to	prevent/limit release from site	-			
	e to natural soils [OMS2]. Sludge should be	incinerated, contained or			
reclaimed [OMS3].					
Conditions and measures	related to municipal sewage treatment pla	ant			
		T			
	al from wastewater via domestic sewage	94.7			
treatment (%)	04 7				
Total efficiency of removal fr (domestic treatment plant) R	94.7				
Maximum allowable site tonnage (M _{Safe}) based on release following total 7.9e2					
wastewater treatment remov					

Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of v	
External treatment and disposal of waste should comply with an regulations [ETW3].	pplicable local and/or national
Conditions and measures related to external recovery of w	
External recovery and recycling of waste should comply with ap regulations [ERW1].	oplicable local and/or national
Additional information on the basis for the allocation of the contained in Petrorisk file in IUCLID Section 13 - "LocalCS	
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace e G21.	exposures unless otherwise indicated.
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate env model [EE2].	-
Section 4 Guidance to check compliance with the Exposur	re Scenario
4.1. Health Available hazard data do not enable the derivation of a DNEL for Management Measures are based on qualitative risk characteri	
Available hazard data do not support the need for a DNEL to be G36. Users are advised to consider national Occupational Expo G38.	
Where other Risk Management Measures/Operational Conditio ensure that risks are managed to at least equivalent levels. G2	
4.2. Environment	
Guidance is based on assumed operating conditions which may scaling may be necessary to define appropriate site-specific ris Required removal efficiency for wastewater can be achieved us alone or in combination [DSU2]. Required removal efficiency for technologies, either alone or in combination [DSU3]. Further de technologies are provided in SpERC factsheet (http://cefic.org/e [DSU4].	k management measures [DSU1]. sing onsite/offsite technologies, either or air can be achieved using onsite etails on scaling and control

9.9.2 Exposure Estimation

9.9.2.1 Human Health

See Appendix 2.a and 2.b.

9.9.2.2 Environment

9.10 Use of Kerosine in Cleaning Agents – Consumer

9.10.1 Exposure Scenario

	Sure Scen			
	posure Scena	ario Title Kerosine		
Title				
Use in Cleanir				
Use Descript				
Sector(s) of U	se		21	
Product Categ	jories		3, 4, 9a, 24, 35, 38	
-			Further information on the mapping and allocation of	
			PC codes is contained in Table 1.	
Environmenta			8a, 8d	
Specific Enviro	onmental Rele	ase Category	ESVOC SpERC 8.4c.v1	
Processes, ta	asks, activitie	s covered		
			from the use of household products sold as washing	
			cants and air care products.	
Assessment	Method		·	
See Section 3				
		ditions and risk m	nanagement measures	
			55	
Section 2.1 C	Control of con	sumer exposure		
Product char				
Physical form	of product	Liquid		
Vapour pressu			ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .	
Concentration	of substance		stated, cover concentrations up to 100% [ConsOC1]	
in product				
Amounts used	1	Unless otherwise s	stated, covers use amounts up to2760g [ConsOC2];	
		covers skin contac	t area up to 857.5cm2 [ConsOC5]	
Frequency and	d duration of	Unless otherwise s	stated, covers use frequency up to 4 times per day	
use/exposure			s exposure up to 8 hours per event [ConsOC14]	
Other Operation			stated assumes use at ambient temperatures	
Conditions aff	ecting		mes use in a 20 m ³ room [ConsOC11]; assumes use	
exposure		with typical ventilat		
Product Cate	gory	Specific Risk Mar	nagement Measures and Operating Conditions	
PC3:Air care	00	l Inless otherwise s	stated, covers concentrations up to 50% [ConsOC1];	
productsAir	00		B65 days/year[ConsOC3]; covers use up to 4 times/day	
care, instant			for each use event, covers use amounts up to 0.1g	
action			s use under typical household ventilation [ConsOC8];	
(aerosol			n size of 20m3[ConsOC11]; for each use event, covers	
sprays)		exposure up to 0.2	25hr/event[ConsOC14];	
	RMM	No specific RMMs	identified beyond those OCs stated [ConsRMM15]	
PC3:Air care	OC	Unless otherwise s	stated, covers concentrations up to 10% [ConsOC1];	
productsAir	00	covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on		
care,		day of use[ConsOC4]; covers skin contact area up to 35.70 cm2		
continuous		[ConsOC5]; for each use event, covers use amounts up to 0.48g		
action (solid		[ConsOC2]; covers use under typical household ventilation [ConsOC8];		
and liquid)				
exposure up to 8.00hr/event[ConsOC14];				
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]		
PC4_n:Anti-	OC		stated, covers concentrations up to 5% [ConsOC1];	
freeze and			65 days/year[ConsOC3]; covers use up to 1 time/on	
de-icing	e-icing day of use[ConsOC4]; for each use event, covers use amounts up to 0.5g			
products		[ConsOC2]; Covers use in a one car garage (34m3) under typical		
Washing car		ventilation [ConsO	C10]; covers use in room size of 34m3[ConsOC11]; for	

window F		each use event, covers exposure up to 0.02hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4_n:Anti- freeze and de-icing products Pouring into radiator	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1]; covers use up to 13 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 428.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 2000g [ConsOC2]; Covers use in a one car garage (34m3) under typical ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.17hr/event[ConsOC14];
		No specific RMMs identified beyond those OCs stated [ConsRMM15]
freeze and de-icing products Lock de-icer		Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 55 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 214.40 cm2 [ConsOC5]; for each use event, covers use amounts up to 4g [ConsOC2]; Covers use in a one car garage (34m3) under typical ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.25hr/event[ConsOC14]; No specific RMMs identified beyond those OCs stated [ConsRMM15]
		Unless otherwise stated, covers concentrations up to 60% [ConsOC1];
Biocidal products (excipient use only for solvent products) Laundry and dish washing		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 857.50 cm2 [ConsOC5]; for each use event, covers use amounts up to 15g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.50hr/event[ConsOC14]; No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC8 n: 0	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
Biocidal products (excipient use only for solvent products)		covers use up to 128 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 857.50 cm2 [ConsOC5]; for each use event, covers use amounts up to 27g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.33hr/event[ConsOC14];
Cleaners, F liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC8_n: (Biocidal products (excipient use only for solvent products)		Unless otherwise stated, covers concentrations up to 20% [ConsOC1]; covers use up to 128 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 214.40 cm2 [ConsOC5]; for each use event, covers use amounts up to 35g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.17hr/event[ConsOC14];
P. 0 0 0 0 0 /		

-		
trigger sprays		
(all purpose		
cleaners,		
sanitary		
products,		
glass		
cleaners)		
',		
PC9a:Coatin	oc	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
gs and		covers use up to 4 days/year[ConsOC3]; covers use up to 1 time/on day
paints, fillers		of use[ConsOC4]; covers skin contact area up to 428.75 cm2 [ConsOC5];
putties,		for each use event, covers use amounts up to 2760g [ConsOC2]; covers
thinners		use under typical household ventilation [ConsOC8]; covers use in room
Waterborne		size of 20m3[ConsOC11]; for each use event, covers exposure up to
latex wall		2.20hr/event[ConsOC14];
paint	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
pant		No specific Rivinis identified beyond those OCS stated [ConsRivini 15]
PC9a:Coatin	ос	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
gs and		covers use up to 6 days/year[ConsOC3]; covers use up to 1 time/on day
paints, fillers		of use[ConsOC4]; covers skin contact area up to 428.75 cm2 [ConsOC5];
putties,		for each use event, covers use amounts up to 744g [ConsOC2]; covers
thinners		use under typical household ventilation [ConsOC8]; covers use in room
Solvent rich,		size of 20m3[ConsOC11]; for each use event, covers exposure up to
high solid,		2.20hr/event[ConsOC14];
water borne	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
paint		
PC9a:Coatin	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1];
gs and	00	
		covers use up to 2 days/year[ConsOC3]; covers use up to 1 time/on day
paints, fillers		of use[ConsOC4]; for each use event, covers use amounts up to 215g
putties,		[ConsOC2]; Covers use in a one car garage (34m3) under typical
thinners		ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for
Aerosol		each use event, covers exposure up to 0.33hr/event[ConsOC14];
spray can	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC9a:Coatin	ос	Unless otherwise stated, covers concentrations up to 90% [ConsOC1];
gs and	00	covers use up to 3 days/year[ConsOC3]; covers use up to 1 time/on day
paints, fillers		of use[ConsOC4]; covers skin contact area up to 857.50 cm2 [ConsOC5];
putties, thinners		for each use event, covers use amounts up to 491g [ConsOC2]; covers
		use under typical household ventilation [ConsOC8]; covers use in room
Removers		size of 20m3[ConsOC11]; for each use event, covers exposure up to
(paint-, glue-,		2.00hr/event[ConsOC14];
wall paper-, sealant-	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
remover)		
PC24:	ос	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
Lubricants,	 	covers use up to 4 days/year[ConsOC3]; covers use up to 1 time/on day
greases, and		of use[ConsOC4]; covers skin contact area up to 468.00 cm2 [ConsOC5];
release		for each use event, covers use amounts up to 2200g [ConsOC2]; Covers
products		use in a one car garage (34m3) under typical ventilation [ConsOC10];
Liquids		covers use in room size of 34m3[ConsOC11]; for each use event, covers
	RMM	exposure up to 0.17hr/event[ConsOC14]; No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC24:	OC	Unless otherwise stated, covers concentrations up to 20% [ConsOC1];
Lubricants,		covers use up to 10 days/year[ConsOC3]; covers use up to 1 time/on day
greases, and		of use[ConsOC4]; covers skin contact area up to 468.00 cm2 [ConsOC5];
release		for each use event, covers use amounts up to 34g [ConsOC2]; covers
products	I	use in room size of m3[ConsOC11];

Pastes	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC24: Lubricants, greases, and release products Sprays	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 6 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 428.75 cm2 [ConsOC5]; for each use event, covers use amounts up to 73g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.17hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC35:Washi ng and cleaning products (including solvent based	OC	Unless otherwise stated, covers concentrations up to 60% [ConsOC1]; covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 857.50 cm2 [ConsOC5]; for each use event, covers use amounts up to 15g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.50hr/event[ConsOC14];
products) Laundry and dish washing products	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC35:Washi ng and cleaning products (including solvent based	oc	Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 128 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 857.50 cm2 [ConsOC5]; for each use event, covers use amounts up to 27g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.33hr/event[ConsOC14];
products) Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC35:Washi ng and cleaning products (including solvent based	OC	Unless otherwise stated, covers concentrations up to 20% [ConsOC1]; covers use up to 128 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 428.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 35g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.17hr/event[ConsOC14];
products) Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass		No specific RMMs identified beyond those OCs stated [ConsRMM15]
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cleaners)				
PC38 n:	OC	I Inless otherwise stated, covers concentration	ons up to 20% [ConsOC1].	
Welding and	00	Unless otherwise stated, covers concentrations up to 20% [ConsOC1]; covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on		
soldering		day of use[ConsOC4]; for each use event, covers use amounts up to 12g		
products, flux		[ConsOC2]; covers use under typical house		
products		covers use in room size of 20m3[ConsOC11		
NOTE,		exposure up to 1.00hr/event[ConsOC14];		
n assessme	RMM	No specific RMMs identified beyond those C	Cs stated [ConsRMM15]	
nt not in TRA				
Additional in	formation on	the basis for the allocation of the identifie	d OCs and RMMs is	
	Appendices 1			
Section 2.2 0	Control of env	rironmental exposure		
Product char				
Substance is o	complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4a].	
Amounts use	ed			
Fraction of EL	J tonnage used	l in region	0.1	
	tonnage (tonne		1.5e3	
-	gional tonnage		0.0005	
	nnage (tonnes		7.4e-1	
	y site tonnage		2.02	
	nd duration of			
Continuous re				
Emission days			365	
		influenced by risk management	•	
Local freshwa	ter dilution fact	tor	10	
Local marine water dilution factor			100	
Other given o	operational co	onditions affecting environmental exposur	.e	
Release fracti	on to air from v	wide dispersive use (regional only)	0.95	
		ter from wide dispersive use	0.025	
		wide dispersive use (regional only)	0.025	
		related to municipal sewage treatment pla		
		posure is driven by freshwater [STP7a].		
		al from wastewater via domestic sewage	94.7	
treatment (%)		ő		
	wable site tonr eatment remov	hage (M_{Safe}) based on release following total (kg/d)	2.4e2	
		treatment plant flow (m ³ /d)	2000	
	-	related to external treatment of waste for	disposal	
		osal of waste should comply with applicable l		
regulations [E	TW3].			
		related to external recovery of waste		
External recover regulations [E		ling of waste should comply with applicable lo	ocal and/or national	
Additional in	formation on	the basis for the allocation of the indentif		
		in IUCLID Section 13 - "LocalCSR" works	heet.	
	posure Estim	ation		
3.1. Health		haan waad ta aatimata aanaa maa	equalstant with the sector for the	
		been used to estimate consumer exposures,		
	es, then they a	he Chapter R15 of the IR&CSA TGD. Where		
3.2. Environn				
		hod has been used to calculate environment	al exposure with the Petrorisk	

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk

model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Predicted exposures are not expected to exceed the applicable consumer reference values when the operational conditions/risk management measures given in section 2 are implemented. G39.

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].

9.10.2 Exposure Estimation

9.10.2.1 Human Health

See Appendix 2.c.

9.10.2.2 Environment

9.11 Use of Kerosine in Lubricants – Industrial

9.11.1 Exposure Scenario

Section 1 Exposure Scena		to	
Section 1 Exposure Scena	ario Title Lubrican	ts	
Title			
Lubricants			
Use Descriptor			
Sector(s) of Use		3	
Process Categories		1, 2, 3, 4, 7, 8a, 8b, 9, 10, 13, 17, 18 Further information on the mapping and allocation of PROC codes is contained in Table 9.1	
Environmental Release Cate	egories	4, 7	
Specific Environmental Rele		ESVOC SpERC 4.6a.v1	
	0,		
Processes, tasks, activitie	s covered		
operation of machinery/engine	nes and similar artic	ed and open systems including material transfers, cles, reworking on reject articles, equipment	
maintenance and disposal o Assessment Method	i wastes.		
See Section 3.	ditions and risk m	anagement measures	
Section 2 Operational con	ultions and risk m	ianayement measures	
Section 2.1 Control of way	kor ovpoduro		
Section 2.1 Control of wor Product characteristics	ker exposure		
Physical form of product	Liquid		
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. OC4.	
Concentration of substance			
in product	Covers percentage substance in the product up to 100 % (unless stated differently) G13		
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) G2		
Other Operational	Assumes use at no	ot more than 20°C above ambient temperatures, unless	
Conditions affecting	stated differently.	G15. Assumes a good basic standard of occupational	
exposure	hygiene is impleme		
Contributing Scenarios	Specific Risk Mar	nagement Measures and Operating Conditions	
General measures (skin irritant) G19	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 skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects 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.		
CS15 General exposures (closed systems) CS16 General exposures	No other specific measures identified. EI20		
(open systems)	No other specific measures identified. El20		
CS14 Bulk transfers		neasures identified. El20	
CS45 Filling preparation of equipment from drums or containers		neasures identified. EI20	
CS75 Initial factory fill of equipment	No other specific n	neasures identified. El20	

CS17 Operation and	No other specific measures identified. EI20			
lubrication of high energy				
open equipment				
CS13 Manual roller	No other specific measures identified. El20			
application or brushing CS35 Treatment of articles	No other energies measures identified FIO			
	No other specific measures identified. El20			
by dipping and pouring CS10 Spraying	No other specific measures identified. EI20			
	•			
CS77 Maintenance (of large plant items) and	No other specific measures identified. EI20			
machine set up				
CS18 Draining equipment	No other specific measures identified. EI20			
(small items)				
CS19 Remanufacture of	No other specific measures identified. EI20			
reject articles				
CS67Storage	No other specific measures identified. EI20			
	the basis for the allocation of the identifie	ed OCs and RMMs is		
contained in Appendices				
Section 2.2 Control of env	vironmental exposure			
Product characteristics				
Substance is complex UVC	3 [PrC3]. Predominantly hydrophobic [PrC4a	1].		
Amounts used				
Fraction of EU tonnage used	t in region	0.1		
Regional use tonnage (tonn		5.5e2		
Fraction of Regional tonnage		1		
Annual site tonnage (tonnes		1.0e2		
Maximum daily site tonnage		5.0e3		
Frequency and duration of	t use			
Continuous release [FD2].				
Emission days (days/year)		20		
	influenced by risk management	1		
Local freshwater dilution fac		10		
Local marine water dilution f		100		
Other given operational co	onditions affecting environmental exposu	re		
Deleges frestiers to sin frame.		E 0 - 0		
	process (initial release prior to RMM)	5.0e-3		
	ter from process (initial release prior to	3.0e-5		
RMM)		0.001		
	process (initial release prior to RMM)	0.001		
	measures at process level (source) to pre			
	oss sites thus conservative process release e			
	is and measures to reduce or limit discha	rges, air emissions and		
releases to soil				
	posure is driven by freshwater [TCR1a].			
	olved substance to or recover from onsite wa	istewater [ICR14].		
No wastewater treatment required [TCR6]. Treat air emission to provide a typical removal efficiency of (%) 70 70				
	0			
	or to receiving water discharge) to provide $p(y \ge 0)$			
the required removal efficiency \geq (%) If discharging to domestic sewage treatment plant, provide the required 0				
onsite wastewater removal efficiency of \geq (%)				
	prevent/limit release from site			
	je to natural soils [OMS2]. Sludge should be	incinerated contained or		
reclaimed [OMS3].				
	related to municipal sewage treatment pla	ant		

Estimated substance removal from wastewater via domestic sewage	94.7		
treatment (%)			
Total efficiency of removal from wastewater after onsite and offsite	94.7		
(domestic treatment plant) RMMs (%)			
Maximum allowable site tonnage (M _{Safe}) based on release following total	4.9e5		
wastewater treatment removal (kg/d)			
Assumed domestic sewage treatment plant flow (m ³ /d)	2000		
Conditions and measures related to external treatment of waste for			
External treatment and disposal of waste should comply with applicable le	ocal and/or national		
regulations [ETW3].			
Conditions and measures related to external recovery of waste			
External recovery and recycling of waste should comply with applicable lo	ocal and/or national		
regulations [ERW1].			
Additional information on the basis for the allocation of the indentif	ied OCs and RMMs is		
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	heet.		
Section 3 Exposure Estimation			
3.1. Health			
The ECETOC TRA tool has been used to estimate workplace exposures	unless otherwise indicated.		
G21.			
3.2. Environment			
The Hydrocarbon Block Method has been used to calculate environmenta	al exposure with the Petrorisk		
model [EE2].			
Section 4 Guidance to check compliance with the Exposure Scenar	io		
4.1. Health			
Available hazard data do not enable the derivation of a DNEL for dermal	irritant effects. G32. Risk		
Management Measures are based on qualitative risk characterisation. G	37.		
Available hazard data do not support the need for a DNEL to be established for other health effects.			
G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values.			
G38.			
Where other Disk Management Maggures (Operational Canditions are ad	anted then users about		
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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.11.2 Exposure Estimation

9.11.2.1 Human Health

See Appendix 2.a and 2.b.

9.11.2.2 Environment

9.12 Use of Kerosine in Lubricants – Professional: Low Environmental Release

9.12.1 Exposure Scenario

9.12.1 Exposure Scena			
Section 1 Exposure Scena	ario Title Kerosine		
Title	our Environment-		
Lubricants – Professional: Low Environmental Release			
Use Descriptor			
Sector(s) of Use		22	
Process Categories		1, 2, 3, 4, 8a, 8b, 9, 10, 11, 13, 17, 18, 20	
		Further information on the mapping and allocation of	
		PROC codes is contained in Table 9.1	
Environmental Release Cate		9a, 9b	
Specific Environmental Rele	• •	ESVOC SpERC 9.6b.v1	
Processes, tasks, activitie			
		ed and open systems including material transfers,	
	nilar articles, rework	king on reject articles, equipment maintenance and	
disposal of waste oil.			
Assessment Method			
See Section 3.			
Section 2 Operational con	ditions and risk m	nanagement measures	
Section 2.1 Control of wor	rker exposure		
Product characteristics			
Physical form of product	Liquid		
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. OC4.	
Concentration of substance		e substance in the product up to 100 % (unless stated	
in product	differently) G13		
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) G2		
Other Operational		ot more than 20°C above ambient temperatures, unless	
Conditions affecting		G15. Assumes a good basic standard of occupational	
exposure	hygiene is impleme		
Contributing Scenarios		nagement Measures and Operating Conditions	
General measures (skin		ontact with product. Identify potential areas for indirect	
irritants) G19.		gloves (tested to EN374) if hand contact with	
		Clean up contamination/spills as soon as they occur.	
		amination immediately. Provide basic employee	
		/ minimise exposures and to report any skin effects	
	that may develop.		
		on measures such as impervious suits and face shields	
		uring high dispersion activities which are likely to lead	
CS15 General exposures	to substantial aerosol release e.g. spraying. E4. No other specific measures identified. EI20		
(closed systems)			
CS26 Operation of	No other specific n	neasures identified. El20	
equipment containing			
engine oils and similar			
CS16 General exposures	No other specific n	neasures identified. EI20	
(open systems)			
CS14 Bulk transfers	No other specific n	neasures identified. EI20	
	No other specific measures identified. EI20		
CS45 Filling preparation of	no other specific n		

equipment from drums or			
containers. CS81			
Dedicated facilities.			
CS45 Filling preparation of	No other specific measures identified. EI20		
equipment from drums or			
containers. CS82 Non- dedicated facilities.			
	No other specific measures identified. EI20		
CS17 Operation and lubrication of high energy	No other specific measures identified. EI20		
open equipment. OC8			
Indoor.			
CS17 Operation and	No other specific measures identified. EI20		
lubrication of high energy			
open equipment. OC9			
Outdoor.			
CS77 Maintenance (of	No other specific measures identified. EI20		
larger plant items) and			
machine set up.			
CS18 Draining equipment	No other specific measures identified. EI20		
(small items) e.g. engine			
drains.			
CS78 Engine lubricant	No other specific measures identified. EI20		
service – to cover small			
additions of oil to engines			
CS13 Manual roller	No other specific measures identified. EI20		
application or brushing of			
coatings	No other energific measures identified. F100		
CS10 Spraying CS109 with local exhaust ventilation	No other specific measures identified. EI20		
CS10 Spraying CS110	No other specific measures identified. EI20		
without local exhaust			
ventilation			
CS36 Treatment of articles	No other specific measures identified. EI20		
by dipping and pouring	•		
CS67 Storage	No other specific measures identified. EI20		
	the basis for the allocation of the identified	d OCs and RMMs is	
contained in Appendices	to 3		
Section 2.2 Control of env	ironmental exposure		
Product characteristics			
Substance is complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4a]		
Amounts used			
Fraction of EU tonnage used	in region	0.1	
Regional use tonnage (tones/year)		2.7e2	
Fraction of Regional tonnage used locally		1	
Annual site tonnage (tonnes/year)		3.7e-1	
Maximum daily site tonnage (kg/day) 3.7e-1 Frequency and duration of use 3.7e-1			
	u36		
Continuous release [FD2]. Emission days (days/year) 365			
	influenced by risk management	303	
		10	
	Local freshwater dilution factor 10		
Local marine water dilution factor 100 Other given operational conditions affecting environmental exposure			
Other given operational CC	nutions affecting environmental exposure	6	
Release fraction to air from y	vide dispersive use (regional only)	0.01	
		0.01	

Release fraction to wastewater from wide dispersive use	0.01
Release fraction to soil from wide dispersive use (regional only)	0.01
Technical conditions and measures at process level (source) to pre-	
Common practices vary across sites thus conservative process release e	
Technical onsite conditions and measures to reduce or limit dischar	rges, air emissions and
releases to soil Risk from environmental exposure is driven by freshwater [TCR1a].	
No secondary wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	N/A
Treat onsite wastewater (prior to receiving water discharge) to provide	0
the required removal efficiency \geq (%)	0
If discharging to domestic sewage treatment plant, provide the required	0
onsite wastewater removal efficiency of \geq (%)	-
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be	incinerated, contained or
reclaimed [ÓMS3].	<i>,</i>
Conditions and measures related to municipal sewage treatment pla	ant
Estimated substance removal from wastewater via domestic sewage	94.7
treatment (%)	94.7
Total efficiency of removal from wastewater after onsite and offsite	94.7
(domestic treatment plant) RMMs (%)	54.7
Maximum allowable site tonnage (M _{Safe}) based on release following total	4.8e1
wastewater treatment removal (kg/d)	
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	disposal
External treatment and disposal of waste should comply with applicable l	
regulations [ETW3].	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable lo	ocal and/or national
regulations [ERW1].	
Additional information on the basis for the allocation of the indentif	
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	heet.
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures	unless otherwise indicated.
G21.	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environments	al exposure with the Petronsi
model [EE2].	-
Section 1 Guidence to check compliance with the Exposure Second	vio
	io
4.1. Health	
4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal	irritant effects. G32. Risk
4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal	irritant effects. G32. Risk
4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G	irritant effects. G32. Risk 37.
4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establish	irritant effects. G32. Risk 37. ned for other health effects.
4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G	irritant effects. G32. Risk 37. ned for other health effects.
 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establish G G G G 	irritant effects. G32. Risk 37. ned for other health effects.
4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi G38.	irritant effects. G32. Risk 37. ned for other health effects. its or other equivalent values.
4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi G38. Where other Risk Management Measures/Operational Conditions are ad	irritant effects. G32. Risk 37. ned for other health effects. its or other equivalent values.
G38. Where other Risk Management Measures/Operational Conditions are ad ensure that risks are managed to at least equivalent levels. G23. 4.2. Environment	irritant effects. G32. Risk 37. ned for other health effects. its or other equivalent values. opted, then users should
 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi G38. Where other Risk Management Measures/Operational Conditions are ad 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 a	irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values. opted, then users should pplicable to all sites; thus,
 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi G38. Where other Risk Management Measures/Operational Conditions are ad 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 a scaling may be necessary to define appropriate site-specific risk manage	irritant effects. G32. Risk 37. hed for other health effects. its or other equivalent values. opted, then users should pplicable to all sites; thus, ment measures [DSU1].
 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi G38. Where other Risk Management Measures/Operational Conditions are ad 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 a scaling may be necessary to define appropriate site-specific risk manage Required removal efficiency for wastewater can be achieved using onsite	irritant effects. G32. Risk 37. ned for other health effects. its or other equivalent values. opted, then users should pplicable to all sites; thus, ment measures [DSU1]. e/offsite technologies, either
 4.1. Health Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi G38. Where other Risk Management Measures/Operational Conditions are ad 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 a scaling may be necessary to define appropriate site-specific risk manage	irritant effects. G32. Risk 37. ned for other health effects. its or other equivalent values opted, then users should pplicable to all sites; thus, ment measures [DSU1]. coffsite technologies, either be achieved using onsite

technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.12.2 Exposure Estimation

9.12.2.1 Human Health

See Appendix 2.a and 2.b.

9.12.2.2 Environment

9.13 Use of Kerosine in Lubricants – Professional: High Environmental Release

9.13.1 Exposure Scenario

9.13.1 Exposure Scena				
Section 1 Exposure Scena	ario Title Kerosine			
Title				
Lubricants – Professional: High Environmental Release				
Use Descriptor				
Sector(s) of Use		22		
Process Categories		1, 2, 3, 4, 8a, 8b, 9,10, 11, 13, 17, 18, 20		
		Further information on the mapping and allocation of		
		PROC codes is contained in Table 9.1		
Environmental Release Cate		8a, 8d		
Specific Environmental Rele	ase Category	ESVOC SpERC 8.6c.v1		
Processes, tasks, activities	s covered			
Covers the use of formulated	d lubricants in close	ed and open systems including material transfers,		
operation of engines and sin	nilar articles, rework	king on reject articles, equipment maintenance and		
disposal of waste oil.				
Assessment Method				
See Section 3.				
Section 2 Operational con	ditions and risk m	nanagement measures		
Section 2.1 Control of wor	rker exposure			
Product characteristics	•			
Physical form of product	Liquid			
Vapour pressure (kPa)	Liquid, vapour pres	ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .		
Concentration of substance		e substance in the product up to 100 % (unless stated		
in product	differently) G13			
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2		
use/exposure				
Other Operational	Assumes use at not more than 20°C above ambient temperatures, unless			
Conditions affecting		G15. Assumes a good basic standard of occupational		
exposure	hygiene is impleme	ented G1		
Contributing Scenarios	Specific Risk Management Measures and Operating Conditions			
General measures (skin	Avoid direct skip o	ontact with product. Identify potential areas for indirect		
irritants) G19.		gloves (tested to EN374) if hand contact with		
		Clean up contamination/spills as soon as they occur.		
		amination immediately. Provide basic employee		
		/ minimise exposures and to report any skin effects		
	that may develop.			
		on measures such as impervious suits and face shields		
		uring high dispersion activities which are likely to lead		
		sol release e.g. spraying. E4.		
CS15 General exposures		neasures identified. El20		
(closed systems)				
CS26 Operation of	No other specific n	neasures identified. El20		
equipment containing				
engine oils and similar				
CS16 General exposures	No other specific n	neasures identified. El20		
(open systems)	-			
CS14 Bulk transfers	No other specific n	neasures identified. El20		
CS45 Filling preparation of	No other specific measures identified. EI20			
equipment from drums or	-			

containers. CS81			
Dedicated facilities.			
CS45 Filling preparation of	No other specific measures identified. EI20		
equipment from drums or			
containers. CS82 Non-			
dedicated facilities.			
CS17 Operation and	No other specific measures identified. EI20		
lubrication of high energy			
open equipment. OC8 Indoor.			
CS17 Operation and	No other specific measures identified. EI20		
lubrication of high energy			
open equipment. OC9			
Outdoor.			
CS77 Maintenance (of	No other specific measures identified. EI20		
larger plant items) and			
machine set up.			
CS18 Draining equipment	No other specific measures identified. EI20		
(small items) e.g. engine drains.			
CS78 Engine lubricant	No other specific measures identified. EI20		
service – to cover small			
additions of oil to engines			
CS13 Manual roller	No other specific measures identified. EI20		
application or brushing of			
coatings			
CS10 Spraying	No other specific measures identified. El20		
CS36 Treatment of articles	No other specific measures identified. EI20		
by dipping and pouring CS67 Storage	No other specific measures identified. EI20		
	the basis for the allocation of the identifi		
contained in Appendices			
Section 2.2 Control of env			
Product characteristics			
Substance is complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4	a].	
Amounts used		-	
Fraction of EU tonnage used	d in region	0.1	
Regional use tonnage (tonn		2.7e2	
Fraction of Regional tonnage		5e-4	
Annual site tonnage (tonnes		1.4e-1	
Maximum daily site tonnage		3.7e-1	
Frequency and duration of	fuse		
Continuous release [FD2].			
Emission days (days/year)		365	
	influenced by risk management		
Local freshwater dilution fac	tor	10	
Local marine water dilution f		100	
Other given operational co	onditions affecting environmental exposu	re	
Release fraction to air from	wide dispersive use (regional only)	1.5e-1	
Release fraction to wastewater from wide dispersive use 0.05			
Release fraction to soil from	Release fraction to soil from wide dispersive use (regional only) 0.05		
	measures at process level (source) to pre		
	oss sites thus conservative process release		
	is and measures to reduce or limit discha		
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Risk from environmental exposure is driven by freshwater [TCR1a].	
No secondary wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	N/A
Treat onsite wastewater (prior to receiving water discharge) to provide	0
the required removal efficiency \geq (%)	
If discharging to domestic sewage treatment plant, provide the required	0
onsite wastewater removal efficiency of \geq (%)	
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be reclaimed [OMS3].	incinerated, contained or
Conditions and measures related to municipal sewage treatment pla	ant
Estimated substance removal from wastewater via domestic sewage treatment (%)	94.7
Total efficiency of removal from wastewater after onsite and offsite	94.7
(domestic treatment plant) RMMs (%)	
Maximum allowable site tonnage (M _{Safe}) based on release following total	4.7e1
wastewater treatment removal (kg/d)	
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	disposal
External treatment and disposal of waste should comply with applicable lo	
regulations [ETW3].	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable lo	ocal and/or national
regulations [ERW1].	
Additional information on the basis for the allocation of the indentif	ied OCs and RMMs is
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	heet.
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures G21.	unless otherwise indicated.
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmenta	al exposure with the Petrorisk
model [EE2].	
Section 4 Guidance to check compliance with the Exposure Scenar	io
4.1. Health	
Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation.	
Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi	
G38.	
Where other Risk Management Measures/Operational Conditions are ad	opted, 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 a	
scaling may be necessary to define appropriate site-specific risk manage	
Required removal efficiency for wastewater can be achieved using onsite	
alone or in combination [DSU2]. Required removal efficiency for air can l	
technologies, either alone or in combination [DSU3]. Further details on s	
technologies are provided in SpERC factsheet (http://cefic.org/en/reach-f	or-industries-libraries.html)
IDSU41.	

[DSU4].

9.13.2 Exposure Estimation

9.13.2.1 Human Health

See Appendix 2.a and 2.b.

9.13.2.2 Environment

9.14 Use of Kerosine in Lubricants – Consumer: Low Environmental Release

9.14.1 Exposure Scenario

	Sure Scen			
	posure Scena	ario Title Kerosine		
Title				
		w Environmental Re	elease	
Use Descript				
Sector(s) of U			21	
Product Categ	gories		1, 6, 24, 31	
			Further information on the mapping and allocation of	
			PC codes is contained in Table 1.	
	I Release Cate		9a, 9b	
	onmental Rele	• •	ESVOC SpERC 9.6d.v1	
	asks, activitie			
			nts in closed and open systems including transfer	
	plication, oper	ation of engines an	d similar articles, equipment maintenance and disposal	
of waste oil.				
Assessment	Method			
See Section 3				
Section 2 Op	perational con	ditions and risk m	nanagement measures	
		sumer exposure		
Product char				
Physical form		liquid		
Vapour pressu			ssure 0.5 - 10 kPa at STP. OC4.	
Concentration	of substance	Unless otherwise s	stated, cover concentrations up to 100% [ConsOC1]	
in product				
Amounts used	ł		stated, covers use amounts up to2200g [ConsOC2];	
			t area up to 468cm2 [ConsOC5]	
Frequency an	d duration of		stated, covers use frequency up to 4 times per day	
use/exposure			s exposure up to 8 hours per event [ConsOC14]	
Other Operation			stated assumes use at ambient temperatures	
Conditions aff	ecting	[ConsOC15]; assumes use in a 20 m ³ room [ConsOC11]; assumes use with typical ventilation [ConsOC8].		
exposure				
Product Cate	gory	Specific Risk Mar	nagement Measures and Operating Conditions	
PC1:Adhesiv	OC	Unless otherwise s	stated, covers concentrations up to 30% [ConsOC1];	
es, sealants			65 days/year[ConsOC3]; covers use up to 1 time/on	
Glues, hobby				
use			ch use event, covers use amounts up to 9g [ConsOC2];	
		covers use under t	typical household ventilation [ConsOC8]; covers use in	
		room size of 20m3	[ConsOC11]; for each use event, covers exposure up	
		to 4.00hr/event[Co		
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]		
PC1:Adhesiv	OC	Unless otherwise stated, covers concentrations up to 30% [ConsOC1];		
es, sealants		covers use up to 6 days/year[ConsOC3]; covers use up to 1 time/on day		
Glue from		of use[ConsOC4]; covers skin contact area up to 35.73 cm2 [ConsOC5];		
spray				
			nousehold ventilation [ConsOC8]; covers use in room	
			SOC11]; for each use event, covers exposure up to	
		4.00hr/event[Cons		
	RMM	No specific RMMs	identified beyond those OCs stated [ConsRMM15]	
PC1:Adhesiv	00	l Inless otherwise a	stated, covers concentrations up to 30% [ConsOC1];	

an arali f		
es, sealants		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
Sealants		day of use[ConsOC4]; covers skin contact area up to 35.73 cm2
		[ConsOC5]; for each use event, covers use amounts up to 75g
		[ConsOC2]; covers use under typical household ventilation [ConsOC8];
		covers use in room size of 20m3[ConsOC11]; for each use event, covers
		exposure up to 1.00hr/event[ConsOC14];
	RMM	Avoid using at a product concentration greater than 25% [ConsRMM1];
		Avoid using when windows closed [ConsRMM8];
PC3:Air care	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
productsAir		covers use up to 365 days/year[ConsOC3]; covers use up to 4 times/day
care, instant		of use[ConsOC4]; for each use event, covers use amounts up to 0.1g
action		[ConsOC2]; covers use under typical household ventilation [ConsOC8];
(aerosol		covers use in room size of 20m3[ConsOC11]; for each use event, covers
sprays)		exposure up to 0.25hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC3:Air care	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1];
productsAir		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
care,		day of use[ConsOC4]; covers skin contact area up to 35.70 cm2
continuous		[ConsOC5]; for each use event, covers use amounts up to 0.48g
action (solid		[ConsOC2]; covers use under typical household ventilation [ConsOC8];
and liquid)		covers use in room size of 20m3[ConsOC11]; for each use event, covers
		exposure up to 8.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4 n:Anti-	OC	Unless otherwise stated, covers concentrations up to 5% [ConsOC1];
freeze and	00	covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
de-icing		day of use[ConsOC4]; for each use event, covers use amounts up to 0.5g
products		[ConsOC2]; Covers use in a one car garage (34m3) under typical
Washing car		ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for
window		
window	RMM	each use event, covers exposure up to 0.02hr/event[ConsOC14];
DC4 n:Anti		No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4_n:Anti-	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1];
freeze and		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
de-icing		day of use[ConsOC4]; covers skin contact area up to 428.00 cm2
products		[ConsOC5]; for each use event, covers use amounts up to 2000g
Pouring into		[ConsOC2]; Covers use in a one car garage (34m3) under typical
radiator		ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for
	D 1414	each use event, covers exposure up to 0.17hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4_n:Anti-	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
freeze and		covers use up to 55 days/year[ConsOC3]; covers use up to 1 time/on day
de-icing		of use[ConsOC4]; covers skin contact area up to 214.40 cm2 [ConsOC5];
products		for each use event, covers use amounts up to 4g [ConsOC2]; Covers use
Lock de-icer		in a one car garage (34m3) under typical ventilation [ConsOC10]; covers
		use in room size of 34m3[ConsOC11]; for each use event, covers
		exposure up to 0.25hr/event[ConsOC14];
	RMM	Avoid using at a product concentration greater than 12.5% [ConsRMM1];
PC6_n	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1];
automotive		covers use up to 55 days/year[ConsOC3]; covers use up to 1 time/on day
care products		of use[ConsOC4]; covers skin contact area up to 214.40 cm2 [ConsOC5];
(in car spray)		for each use event, covers use amounts up to 10g [ConsOC2]; covers
		use under typical household ventilation [ConsOC8]; covers use in room
		size of 20m3[ConsOC11]; for each use event, covers exposure up to
		0.17hr/event[ConsOC14];
	RMM	Avoid using at a product concentration greater than 6% [ConsRMM1];
PC6 n	OC	Unless otherwise stated, covers concentrations up to 30% [ConsOC1];
automotive		covers use up to 29 days/year[ConsOC3]; covers use up to 1 time/on day
care products		of use[ConsOC4]; covers skin contact area up to 428.00 cm2 [ConsOC5];
(in car polish)		for each use event, covers use amounts up to 100g [ConsOC2]; Covers
		use in a one car garage (34m3) under typical ventilation [ConsOC10];
	1	

		covers use in room size of 34m3[ConsOC11	1: for each use event, covers		
		exposure up to 0.50hr/event[ConsOC14];],		
	RMM	Avoid using at a product concentration great	er than 12.5% [ConsRMM1];		
PC24:	OC	Unless otherwise stated, covers concentration			
Lubricants,		covers use up to 4 days/year[ConsOC3]; cov	vers use up to 1 time/on day		
greases, and		of use[ConsOC4]; covers skin contact area ι			
release		for each use event, covers use amounts up to 2200g [ConsOC2]; Covers			
products		use in a one car garage (34m3) under typical ventilation [ConsOC10];			
Liquids		covers use in room size of 34m3[ConsOC11]; for each use event, covers		
		exposure up to 0.17hr/event[ConsOC14];			
D O O (RMM	No specific RMMs identified beyond those O			
PC24:	OC	Unless otherwise stated, covers concentration			
Lubricants,		covers use up to 10 days/year[ConsOC3]; co			
greases, and release		of use[ConsOC4]; covers skin contact area u			
products		for each use event, covers use amounts up t use under typical household ventilation [Con			
Pastes		size of 20m3[ConsOC11]; for each use even			
r asies		0.17hr/event[ConsOC14];	it, covers exposure up to		
	RMM	No specific RMMs identified beyond those O	Cs stated [ConsRMM15]		
PC24:	OC	Unless otherwise stated, covers concentration			
Lubricants,		covers use up to 6 days/year[ConsOC3]; cov			
greases, and		of use[ConsOC4]; covers skin contact area u			
release		for each use event, covers use amounts up t			
products		use under typical household ventilation [Con			
Sprays		size of 20m3[ConsOC11]; for each use even	it, covers exposure up to		
		0.17hr/event[ConsOC14];			
	RMM	No specific RMMs identified beyond those O			
PC31:Polishe	OC	Unless otherwise stated, covers concentration			
s and wax		covers use up to 29 days/year[ConsOC3]; covers use up to 1 time/on day			
blends		of use[ConsOC4]; covers skin contact area up to 430.00 cm2 [ConsOC5];			
Polishes,		for each use event, covers use amounts up to 142g [ConsOC2]; covers			
wax / cream			use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to		
(floor,		1.23hr/event[ConsOC14];			
furniture, shoes)	RMM	1.23hr/event[ConsOC14]; No specific RMMs identified beyond those OCs stated [ConsRMM15]			
Silves)			CS Stated [Consciention 15]		
PC31:Polishe	OC	Unless otherwise stated, covers concentration	ons up to 50% [ConsOC1];		
s and wax		covers use up to 8 days/year[ConsOC3]; cov	vers use up to 1 time/on day		
blends		of use[ConsOC4]; covers skin contact area u	up to 430.00 cm2 [ConsOC5];		
Polishes,		for each use event, covers use amounts up t			
spray		use under typical household ventilation [Con			
(furniture,		size of 20m3[ConsOC11]; for each use even	t, covers exposure up to		
shoes)		0.33hr/event[ConsOC14];			
	RMM	No specific RMMs identified beyond those O			
	Appendices	the basis for the allocation of the identifie	d UCS and Rivivis is		
		rironmental exposure			
Product char					
		3 [PrC3]. Predominantly hydrophobic [PrC4a	1		
Amounts use			1.		
		t in region	0.1		
	U tonnage used in region 0.1 e tonnage (tonnes/year) 2.7e2				
-	- ·				
	n of Regional tonnage used locally 0.0005				
	al site tonnage (tonnes/year) 1.4e-1				
Maximum daily site tonnage (kg/day) 3.7e-1 Frequency and duration of use 3.7e-1					
Continuous re		030			
Continuous re	icase [FD2].				

Emission days (days/year)	365
Environmental factors not influenced by risk management	·
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposu	°e
Release fraction to air from wide dispersive use (regional only)	0.01
Release fraction to wastewater from wide dispersive use	0.01
Release fraction to soil from wide dispersive use (regional only)	0.01
Conditions and measures related to municipal sewage treatment pla	ant
Risk from environmental exposure is driven by freshwater [STP7a].	
Estimated substance removal from wastewater via domestic sewage treatment (%)	94.7
Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d)	48
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	disposal
External treatment and disposal of waste should comply with applicable I regulations [ETW3]. Conditions and measures related to external recovery of waste	ocal and/or national
External recovery and recycling of waste should comply with applicable lo	acal and/or national
regulations [ERW1].	
Additional information on the basis for the allocation of the indentif	ied OCs and RMMs is
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	heet.
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate consumer exposures, ECETOC Report #107 and the Chapter R15 of the IR&CSA TGD. Where to these sources, then they are indicated.	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environment model [EE2].	al exposure with the Petrorisk
Section 4 Guidance to check compliance with the Exposure Scenar	io
4.1. Health	
Predicted exposures are not expected to exceed the applicable consume	
operational conditions/risk management measures given in section 2 are	implemented. G39.
Where other Risk Management Measures/Operational Conditions are ad	opted, then users should
ensure that risks are managed to at least equivalent levels. G23.	
4.2. Environment	policable to all sites: thus
Guidance is based on assumed operating conditions which may not be a scaling may be necessary to define appropriate site-specific risk manage Further details on scaling and control technologies are provided in SpER	ment measures [DSU1].
(http://cofic.org/op/roach.for.industrios.librarios.html) [DSI/4]	

(http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.14.2 Exposure Estimation

9.14.2.1 Human Health

See Appendix 2.c.

9.14.2.2 Environment

9.15 Use of Kerosine in Lubricants – Consumer: High Environmental Release

9.15.1 Exposure Scenario

	Doure Scena	ario Title Kerosine		
Title	posure Scena	ario fille Kerosine		
	onsumor: high	n environmental rele	0250	
Use Descripte			04	
Sector(s) of U			21	
Product Categ	jories		1, 6, 24, 31	
			Further information on the mapping and allocation of	
E in			PC codes is contained in Table 1.	
Environmenta			8a, 8d	
Specific Enviro		• •	ESVOC SpERC 8.6e.v1	
Processes, ta				
			nts in closed and open systems including transfer	
	plication, oper	ation of engines an	d similar articles, equipment maintenance and disposal	
of waste oil.				
Assessment	Method			
See Section 3				
Section 2 Op	erational con	ditions and risk m	nanagement measures	
		sumer exposure		
Product char				
Physical form		liquid		
Vapour pressu			ssure 0.5 - 10 kPa at STP. OC4.	
	of substance	Unless otherwise s	stated, cover concentrations up to 100% [ConsOC1]	
in product				
Amounts used	1		stated, covers use amounts up to2200g [ConsOC2];	
			t area up to 468cm2 [ConsOC5]	
Frequency and	d duration of		stated, covers use frequency up to 4 times per day	
use/exposure			s exposure up to 8 hours per event [ConsOC14]	
Other Operatio			stated assumes use at ambient temperatures	
Conditions affe	ecting	[ConsOC15]; assumes use in a 20 m ³ room [ConsOC11]; assumes use with typical ventilation [ConsOC8].		
exposure				
Product Cate	gory	Specific Risk Mar	nagement Measures and Operating Conditions	
PC1:Adhesiv	00	Unless otherwise s	stated, covers concentrations up to 30% [ConsOC1];	
es, sealants			65 days/year[ConsOC3]; covers use up to 1 time/on	
Glues, hobby			C4]; covers skin contact area up to 35.73 cm2	
use			ch use event, covers use amounts up to 9g [ConsOC2];	
			typical household ventilation [ConsOC8]; covers use in	
		room size of 20m3	[ConsOC11]; for each use event, covers exposure up	
		to 4.00hr/event[Co	nsOC14];	
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]		
PC1:Adhesiv	ос	Unless otherwise stated, covers concentrations up to 30% [ConsOC1];		
es, sealants	00	covers use up to 6 days/year[ConsOC3]; covers use up to 1 time/on day		
Glue from		of use[ConsOC4]; covers skin contact area up to 35.73 cm2 [ConsOC5];		
spray			t, covers use amounts up to 85.05g [ConsOC2]; covers	
			nousehold ventilation [ConsOC8]; covers use in room	
			SOC11]; for each use event, covers exposure up to	
		4.00hr/event[Cons		
	RMM		identified beyond those OCs stated [ConsRMM15]	
		•		
PC1:Adhesiv		Unless otherwise s	stated, covers concentrations up to 30% [ConsOC1];	

an arali f		
es, sealants		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
Sealants		day of use[ConsOC4]; covers skin contact area up to 35.73 cm2
		[ConsOC5]; for each use event, covers use amounts up to 75g
		[ConsOC2]; covers use under typical household ventilation [ConsOC8];
		covers use in room size of 20m3[ConsOC11]; for each use event, covers
		exposure up to 1.00hr/event[ConsOC14];
	RMM	Avoid using at a product concentration greater than 25% [ConsRMM1];
		Avoid using when windows closed [ConsRMM8];
PC3:Air care	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
productsAir		covers use up to 365 days/year[ConsOC3]; covers use up to 4 times/day
care, instant		of use[ConsOC4]; for each use event, covers use amounts up to 0.1g
action		[ConsOC2]; covers use under typical household ventilation [ConsOC8];
(aerosol		covers use in room size of 20m3[ConsOC11]; for each use event, covers
sprays)		exposure up to 0.25hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC3:Air care	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1];
productsAir		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
care,		day of use[ConsOC4]; covers skin contact area up to 35.70 cm2
continuous		[ConsOC5]; for each use event, covers use amounts up to 0.48g
action (solid		[ConsOC2]; covers use under typical household ventilation [ConsOC8];
and liquid)		covers use in room size of 20m3[ConsOC11]; for each use event, covers
		exposure up to 8.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4 n:Anti-	OC	Unless otherwise stated, covers concentrations up to 5% [ConsOC1];
freeze and	00	covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
de-icing		day of use[ConsOC4]; for each use event, covers use amounts up to 0.5g
products		[ConsOC2]; Covers use in a one car garage (34m3) under typical
Washing car		ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for
window		
window	RMM	each use event, covers exposure up to 0.02hr/event[ConsOC14];
DC4 n:Anti		No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4_n:Anti-	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1];
freeze and		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on
de-icing		day of use[ConsOC4]; covers skin contact area up to 428.00 cm2
products		[ConsOC5]; for each use event, covers use amounts up to 2000g
Pouring into		[ConsOC2]; Covers use in a one car garage (34m3) under typical
radiator		ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for
	D 1414	each use event, covers exposure up to 0.17hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]
PC4_n:Anti-	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];
freeze and		covers use up to 55 days/year[ConsOC3]; covers use up to 1 time/on day
de-icing		of use[ConsOC4]; covers skin contact area up to 214.40 cm2 [ConsOC5];
products		for each use event, covers use amounts up to 4g [ConsOC2]; Covers use
Lock de-icer		in a one car garage (34m3) under typical ventilation [ConsOC10]; covers
		use in room size of 34m3[ConsOC11]; for each use event, covers
		exposure up to 0.25hr/event[ConsOC14];
	RMM	Avoid using at a product concentration greater than 12.5% [ConsRMM1];
PC6_n	OC	Unless otherwise stated, covers concentrations up to 10% [ConsOC1];
automotive		covers use up to 55 days/year[ConsOC3]; covers use up to 1 time/on day
care products		of use[ConsOC4]; covers skin contact area up to 214.40 cm2 [ConsOC5];
(in car spray)		for each use event, covers use amounts up to 10g [ConsOC2]; covers
		use under typical household ventilation [ConsOC8]; covers use in room
		size of 20m3[ConsOC11]; for each use event, covers exposure up to
		0.17hr/event[ConsOC14];
	RMM	Avoid using at a product concentration greater than 6% [ConsRMM1];
PC6 n	OC	Unless otherwise stated, covers concentrations up to 30% [ConsOC1];
automotive		covers use up to 29 days/year[ConsOC3]; covers use up to 1 time/on day
care products		of use[ConsOC4]; covers skin contact area up to 428.00 cm2 [ConsOC5];
(in car polish)		for each use event, covers use amounts up to 100g [ConsOC2]; Covers
		use in a one car garage (34m3) under typical ventilation [ConsOC10];
	1	

		covers use in room size of 34m3[ConsOC1 ⁻	I]; for each use event, covers	
	DIANA	exposure up to 0.50hr/event[ConsOC14];		
D004	RMM	Avoid using at a product concentration greater than 12.5% [ConsRMM1];		
PC24:	OC	Unless otherwise stated, covers concentrations up to 100% [ConsOC1];		
Lubricants,		covers use up to 4 days/year[ConsOC3]; covers use up to 1 time/on day		
greases, and		of use[ConsOC4]; covers skin contact area up to 468.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 2200g [ConsOC2]; Covers		
release				
products		use in a one car garage (34m3) under typical ventilation [ConsOC10];		
Liquids		covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.17hr/event[ConsOC14];		
	RMM	No specific RMMs identified beyond those C	Cs stated [ConsPMM15]	
PC24:	OC	Unless otherwise stated, covers concentrati		
Lubricants,	00	covers use up to 10 days/year[ConsOC3]; c		
greases, and		of use[ConsOC4]; covers skin contact area		
release		for each use event, covers use amounts up		
products		use under typical household ventilation [Cor		
Pastes		size of 20m3[ConsOC11]; for each use ever		
1 00100		0.17hr/event[ConsOC14];		
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]		
PC24:	OC	Unless otherwise stated, covers concentrati		
Lubricants,		covers use up to 6 days/year[ConsOC3]; co		
greases, and		of use[ConsOC4]; covers skin contact area		
release		for each use event, covers use amounts up		
products		use under typical household ventilation [Cor		
Sprays		size of 20m3[ConsOC11]; for each use ever		
		0.17hr/event[ConsOC14];		
	RMM	No specific RMMs identified beyond those C	DCs stated [ConsRMM15]	
PC31:Polishe	OC	Unless otherwise stated, covers concentrati		
s and wax		covers use up to 29 days/year[ConsOC3]; c	overs use up to 1 time/on day	
blends		of use[ConsOC4]; covers skin contact area		
Polishes,		for each use event, covers use amounts up to 142g [ConsOC2]; covers		
wax / cream		use under typical household ventilation [ConsOC8]; covers use in room		
(floor,		size of 20m3[ConsOC11]; for each use event, covers exposure up to		
furniture,		1.23hr/event[ConsOC14];		
shoes)	RMM	No specific RMMs identified beyond those C	DCs stated [ConsRMM15]	
PC31:Polishe	00	Unless otherwise stated, covers concentrati	one up to 50% [ConeOC1]:	
s and wax	00			
blends		covers use up to 8 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 430.00 cm2 [ConsOC5];		
Polishes,				
spray		for each use event, covers use amounts up to 35g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room		
(furniture,		size of 20m3[ConsOC11]; for each use event, covers exposure up to		
shoes)		0.33hr/event[ConsOC14];		
,	RMM	No specific RMMs identified beyond those C	Cs stated [ConsRMM15]	
Additional in		the basis for the allocation of the identifie		
contained in				
Section 2.2 0	Control of en	vironmental exposure		
Product char	acteristics			
Substance is o	complex UVC	3 [PrC3]. Predominantly hydrophobic [PrC4a	ı].	
Amounts use	d			
Fraction of EU tonnage used in region 0.1				
	use tonnage (tones/year) 2.7e2			
-	Fraction of Regional tonnage used locally 0.0005			
	Annual site tonnage (tonnes/year) 1.4e-1			
			3.7e-1	
Maximum daily site tonnage (kg/day) 3.7e-1 Frequency and duration of use				
Continuous re		1 430		

Emission days (days/year)	365	
Environmental factors not influenced by risk management		
Local freshwater dilution factor	10	
Local marine water dilution factor	100	
Other given operational conditions affecting environmental exposu	re	
Release fraction to air from wide dispersive use (regional only)	1.5e-1	
Release fraction to wastewater from wide dispersive use	0.05	
Release fraction to soil from wide dispersive use (regional only)	0.05	
Conditions and measures related to municipal sewage treatment pla	ant	
Risk from environmental exposure is driven by freshwater [STP7a].		
Estimated substance removal from wastewater via domestic sewage treatment (%)	94.7	
Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d)	47	
Assumed domestic sewage treatment plant flow (m ³ /d)	2000	
Conditions and measures related to external treatment of waste for	disposal	
External treatment and disposal of waste should comply with applicable I regulations [ETW3].	ocal and/or national	
Conditions and measures related to external recovery of waste		
External recovery and recycling of waste should comply with applicable lo regulations [ERW1].	ocal and/or national	
Additional information on the basis for the allocation of the indentif		
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	heet.	
Section 3 Exposure Estimation		
3.1. Health		
The ECETOC TRA tool has been used to estimate consumer exposures, ECETOC Report #107 and the Chapter R15 of the IR&CSA TGD. Where to these sources, then they are indicated.		
3.2. Environment		
The Hydrocarbon Block Method has been used to calculate environment model [EE2].	al exposure with the Petrorisk	
Section 4 Guidance to check compliance with the Exposure Scenar	io	
4.1. Health		
Predicted exposures are not expected to exceed the applicable consumer reference values when the		
operational conditions/risk management measures given in section 2 are	implemented. G39.	
Where other Risk Management Measures/Operational Conditions are ad	opted, 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 a scaling may be necessary to define appropriate site-specific risk manage Further details on scaling and control technologies are provided in SpER	ment measures [DSU1].	
(http://cefic.org/en/reach_for_industries_libraries_html) [DSI 1/1]		

(http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.15.2 Exposure Estimation

9.15.2.1 Human Health

See Appendix 2.c.

9.15.2.2 Environment

9.16 Use of Kerosine in Metal Working Fluids/Rolling Oils -Industrial

9.16.1 Exposure Scenario			
Section 1 Exposure Scena			
Title			
Use in Metal Working Fluids	/Rolling Oils		
Use Descriptor			
Sector(s) of Use		3	
Process Categories		1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 17	
3		Further information on the mapping and allocation of	
		PROC codes is contained in Table 9.1	
Environmental Release Cate	egories	4	
Specific Environmental Rele	ase Category	ESVOC SpERC 4.7a.v1	
Processes, tasks, activitie			
activities, cutting/machining (including brushing, dipping oils.	activities, automate	including transfer operations, rolling and annealing ed and manual application of corrosion protections ipment maintenance, draining and disposal of waste	
Assessment Method			
See Section 3.			
Section 2 Operational con	ditions and risk m	nanagement measures	
Section 2.1 Control of wo	rker exposure		
Product characteristics	-		
Physical form of product	Liquid		
Vapour pressure (kPa)	Liquid, vapour pressure 0.5 - 10 kPa at STP. OC4.		
Concentration of substance in product			
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) G2		
Other Operational	Assumes use at not more than 20°C above ambient temperatures, unless		
Conditions affecting exposure	stated differently. G15. Assumes a good basic standard of occupational hygiene is implemented G1		
Contributing Scenarios	Specific Risk Management Measures and Operating Conditions		
General measures (skin irritants) G19.	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 skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects 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.		
CS15 General exposures (closed systems)	No other specific measures identified. EI20		
CS16 General exposures (open systems)	No other specific measures identified. El20		
CS14 Bulk transfers	No other specific measures identified. El20		
CS45 Filling preparation of equipment from drums or containers.	•		

000 Dec	No. Alexandre (C. 1997)			
CS2 Process sampling	No other specific measures identified. EI20			
	CS79 Metal machining No other specific measures identified. EI20			
operations	No other encoding measures identified 510			
S35 Treatment of articles No other specific measures identified. El20 y dipping and pouring				
CS10 Spraying	1			
CS10 Spraying CS13 Manual roller	No other specific measures identified. El20 No other specific measures identified. El20			
application or rolling)		
CS80 Automated metal	No other specific measures identified. EI20)		
rolling/forming	No other specific measures identified.	5		
CS83 Semi-automated	No other specific measures identified. EI20)		
metal rolling/forming				
CS39 Equipment cleaning	No other specific measures identified. EI20)		
and maintenance. CS81				
Dedicated facilities.				
CS39 Equipment cleaning	No other specific measures identified. EI20)		
and maintenance. CS82				
Non-dedicated facilities.				
CS67 Storage	No other specific measures identified. EI20			
	the basis for the allocation of the identif	ied OCs and RMMs is		
contained in Appendices				
Section 2.2 Control of env	vironmental exposure			
Product characteristics				
Substance is complex UVCI	3 [PrC3]. Predominantly hydrophobic [PrC4	la].		
Amounts used		-		
Fraction of EU tonnage use	d in region	0.1		
	-	5.5e2		
Regional use tonnage (tone				
Fraction of Regional tonnag		0.18		
Annual site tonnage (tonnes		1.0e2		
Maximum daily site tonnage		5.0e3		
Frequency and duration o	f use			
Continuous release [FD2].				
Emission days (days/year)		20		
Environmental factors not	influenced by risk management			
Local freshwater dilution fac	tor	10		
Local marine water dilution		100		
	onditions affecting environmental exposi-			
<u> </u>				
Release fraction to air from	process (initial release prior to RMM)	0.02		
	3.0e-5			
Release fraction to wastewater from process (initial release prior to 3.0e-5 RMM)				
Release fraction to soil from process (initial release prior to RMM) 0				
Technical conditions and measures at process level (source) to prevent release				
	oss sites thus conservative process release			
releases to soil	ns and measures to reduce or limit disch	arges, air emissions and		
	oosure is driven by freshwater [TCR1a].			
		(actowator [TCP14]		
No wastewater treatment re	olved substance to or recover from onsite w	asiewalei [IUR 14].		
		70		
······································				
the required removal efficiency \geq (%) If discharging to domestic sewage treatment plant, provide the required 0				
onsite wastewater removal efficiency of \geq (%)				
	prevent/limit release from site	o incinorated contained or		
	e to natural soils [OMS2]. Sludge should b	e incinerateu, containeu or		
2010-07-01 CSR	180			

Conditions and measures related to municipal sewage treatment pla	int
Estimated substance removal from wastewater via domestic sewage treatment (%)	94.7
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	94.7
Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d)	4.9e5
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	disposal
External treatment and disposal of waste should comply with applicable lo regulations [ETW3].	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable lo regulations [ERW1].	
Additional information on the basis for the allocation of the indentifi contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures G21.	unless otherwise indicated.
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmenta model [EE2].	
Section 4 Guidance to check compliance with the Exposure Scenar	io
4.1. Health	
Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G3	
Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi G38.	
Where other Risk Management Measures/Operational Conditions are addensure that risks are managed to at least equivalent levels. G23.	opted, then users should
4.2. Environment	
Guidance is based on assumed operating conditions which may not be a scaling may be necessary to define appropriate site-specific risk manage Required removal efficiency for wastewater can be achieved using onsite alone or in combination [DSU2]. Required removal efficiency for air can be technologies, either alone or in combination [DSU3]. Further details on s	ment measures [DSU1]. /offsite technologies, either be achieved using onsite

9.16.2 Exposure Estimation

9.16.2.1 Human Health

See Appendix 2.a and 2.b.

9.16.2.2 Environment

9.17 Use of Kerosine in Metal Working Fluids/Rolling Oils – Professional

9.17.1 Exposure Scenario

Section 1 Exposure Scenario Title Kerosine				
	ario litte Kerosine			
Title				
	Use in Metal Working Fluids/Rolling Oils			
Use Descriptor				
Sector(s) of Use		3		
Process Categories		1, 2, 3, 5, 8a, 8b, 9, 10, 11, 13, 17		
		Further information on the mapping and allocation of		
		PROC codes is contained in Table 9.1		
Environmental Release Cate		8a, 8d		
Specific Environmental Rele		ESVOC 8.7c.v1		
Processes, tasks, activitie				
		including transfer operations, rolling and annealing		
		d and manual application of corrosion protections		
	and spraying), equi	pment maintenance, draining and disposal of waste		
oils.				
Assessment Method				
See Section 3.				
Section 2 Operational con	ditions and risk m	nanagement measures		
Section 2.1 Control of wor	ker exposure			
Product characteristics				
Physical form of product	Liquid			
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .		
Concentration of substance		e substance in the product up to 100 % (unless stated		
in product	differently) G13			
Frequency and duration of	Covers daily exposures up to 8 hours (unless stated differently) G2			
use/exposure				
Other Operational	Assumes use at not more than 20°C above ambient temperatures, unless			
Conditions affecting	stated differently. G15. Assumes a good basic standard of occupational			
exposure	hygiene is implemented G1			
Contributing Scenarios	Specific Risk Management Measures and Operating Conditions			
General measures (skin	Avoid direct skin c	ontact with product. Identify potential areas for indirect		
irritants) G19.		gloves (tested to EN374) if hand contact with		
		Clean up contamination/spills as soon as they occur.		
		amination immediately. Provide basic employee		
	training to prevent / minimise exposures and to report any skin effects			
that may develop				
		on measures such as impervious suits and face shields		
		uring high dispersion activities which are likely to lead		
	to substantial aerosol release e.g. spraying. E4.			
CS15 General exposures	No other specific measures identified. EI20			
(closed systems)				
CS14 Bulk transfers	No other specific measures identified. EI20			
CS45 Filling preparation of	No other specific measures identified. EI20			
equipment from drums or				
containers. CS81				
Dedicated facilities.				
		neasures identified. El20		

equipment from drums or					
containers. CS82 Non- dedicated facilities.					
	No other appoific macoures identified FI20				
CS2 Process sampling	No other specific measures identified. EI20				
operations	S79 Metal machining No other specific measures identified. El20				
CS13 Manual roller	No other specific measures identified. EI20				
application or rolling					
CS10 Spraying	No other specific measures identified. EI20				
CS35 Treatment of articles	No other specific measures identified. EI20				
by dipping and pouring					
CS39 Equipment cleaning	g No other specific measures identified. EI20				
and maintenance. CS81					
Dedicated facilities.					
CS39 Equipment cleaning	No other specific measures identified. El20				
and maintenance. CS82					
Non-dedicated facilities.					
CS67 Storage	No other specific measures identified. EI20				
	the basis for the allocation of the identifie	ed OCs and RMMs is			
contained in Appendices					
Section 2.2 Control of env	vironmental exposure				
Product characteristics					
Substance is complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4a].			
Amounts used					
Fraction of EU tonnage used	d in region	0.1			
Regional use tonnage (tonne		5.5e2			
Fraction of Regional tonnage		5e-4			
Annual site tonnage (tonnes		2.7e-1			
Maximum daily site tonnage		7.5e-1			
Frequency and duration of		7.00 1			
Continuous release [FD2].					
Emission days (days/year)		365			
	influenced by risk management	565			
Local freshwater dilution fac		10			
	Local marine water dilution factor 100 Other given operational conditions affecting environmental exposure				
Other given operational co	biolitions affecting environmental exposur	.6			
Release fraction to air from	wide dispersive use (regional only)	0.15			
	ter from wide dispersive use	0.05			
Release fraction to soil from wide dispersive use (regional only) 0.05					
Technical conditions and	measures at process level (source) to pre	vent release			
Common practices vary acro	oss sites thus conservative process release e	estimates used [TCS1].			
Technical onsite condition	is and measures to reduce or limit discha	rges, air emissions and			
releases to soil		_			
	oosure is driven by freshwater [TCR1a].				
No wastewater treatment required [TCR6].					
Treat air emission to provide a typical removal efficiency of (%) N/A					
Treat onsite wastewater (prior to receiving water discharge) to provide 0					
the required removal efficiency ≥ (%)					
If discharging to domestic sewage treatment plant, provide the required 0					
onsite wastewater removal efficiency of ≥ (%) Organisation measures to prevent/limit release from site					
		in the part of the sector is the			
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or					
reclaimed [OMS3].	related to municipal covers treatment at	ant			
conultions and measures	related to municipal sewage treatment pla	aiit			

Estimated substance removal from wastewater via domestic sewage treatment (%)	94.7
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	94.7
Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/d)	90
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	disposal
External treatment and disposal of waste should comply with applicable I regulations [ETW3].	ocal and/or national
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable lo regulations [ERW1].	ocal and/or national
Additional information on the basis for the allocation of the indentif	ied OCs and RMMs is
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	heet.
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures G21.	unless otherwise indicated.
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environment model [EE2].	al exposure with the Petrorisk
Section 4 Guidance to check compliance with the Exposure Scenar	io
4.1. Health	
Available hazard data do not enable the derivation of a DNEL for dermal Management Measures are based on qualitative risk characterisation. G	
Available hazard data do not support the need for a DNEL to be establish G36. Users are advised to consider national Occupational Exposure Limi G38.	
Where other Risk Management Measures/Operational Conditions are ad	opted, 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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.17.2 Exposure Estimation

9.17.2.1 Human Health

See Appendix 2.a and 2.b.

9.17.2.2 Environment

9.18 Use of Kerosine as Release Agents or Binders – Industrial

9.18.1 Exposure Scenario			
Section 1 Exposure Scenario Title Kerosine			
Title	to do un		
Use as Release Agents or B	Inders		
Use Descriptor			
Sector(s) of Use		3	
Process Categories		1, 2, 3, 4, 6, 7, 8b, 10, 13, 14	
		Further information on the mapping and allocation of	
		PROC codes is contained in Table 9.1	
Environmental Release Cate		4	
Specific Environmental Rele	• •	ESVOC SpERC 4.10a.v1	
Processes, tasks, activitie	scovered		
		ncluding material transfers, mixing, application	
Assessment Method	ning), mouia iormin	g and casting, and handling of waste.	
See Section 3.			
Section 2 Operational con	iuitions and risk m	lanagement measures	
Section 2.1 Control of wo	rkor ovnosuro		
Product characteristics			
Physical form of product	Liquid		
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP_OC4	
Concentration of substance	Liquid, vapour pressure 0.5 - 10 kPa at STP. OC4. Covers percentage substance in the product up to 100 % (unless stated		
in product	differently) G13		
in product			
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2	
use/exposure			
Other Operational	Assumes use at not more than 20°C above ambient temperatures, unless		
Conditions affecting	stated differently. G15. Assumes a good basic standard of occupational		
exposure	hygiene is implemented G1		
Contributing Scenarios	Specific Risk Management Measures and Operating Conditions		
General measures (skin	Avoid direct skin co	ontact with product. Identify potential areas for indirect	
irritants) G19.	skin contact. Wear gloves (tested to EN374) if hand contact with		
,	substance likely. Clean up contamination/spills as soon as they occur.		
	Wash off skin contamination immediately. Provide basic employee		
	training to prevent / minimise exposures and to report any skin effects		
	that may develop. E3		
	Other skin protection measures such as impervious suits and face shields		
		uring high dispersion activities which are likely to lead	
CS14 Bulk transfers	to substantial aerosol release e.g. spraying. E4.		
	No other specific measures identified. El20		
CS8 Drum/batch transfers	No other specific measures identified. EI20		
CS29 mixing operations	No other specific measures identified. El20		
(closed systems)			
CS30 mixing operations No other specific measures identified. El20			
(open systems)	open systems)		
CS31 Mould forming	No other specific measures identified. El20		
CS32 Casting operations	No other specific measures identified. El20		
CS33 Machine	No other specific measures identified. EI20		
S10 Spraying			

9.18.1 Exposure Scenario

CC24 Manual	No other exactly measures identified FI20				
CS34 Manual CS10 Manual spraying	No other specific measures identified. EI20				
CS13 Manual applications	No other specific measures identified. El20				
e.g. brushing, rolling	No other specific measures identified. Lizo				
CS4 Dipping, immersion	No other specific measures identified. El20				
and pouring					
	No other specific measures identified. El20				
Additional information on	the basis for the allocation of the identifie	d OCs and RMMs is			
contained in Appendices 1					
Section 2.2 Control of env	rironmental exposure				
Product characteristics					
Substance is complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4a].			
Amounts used					
Fraction of EU tonnage used	t in region	0.1			
Regional use tonnage (tonne		8.0e2			
Fraction of Regional tonnage		1			
Annual site tonnage (tonnes		8.0e2			
Maximum daily site tonnage		4.0e4			
Frequency and duration of		4.064			
Continuous release [FD2].	use				
		20			
Emission days (days/year)	influenced by risk management	20			
		40			
Local freshwater dilution fact		10			
		100			
Other given operational co	onditions affecting environmental exposur	e			
Pelease fraction to air from r	process (initial release prior to RMM)	1.0			
Release fraction to wastewater from process (initial release prior to 3.0e-6 RMM)					
Release fraction to soil from process (initial release prior to RMM) 0					
Technical conditions and measures at process level (source) to prevent release					
	oss sites thus conservative process release e				
	is and measures to reduce or limit discha	rges, air emissions and			
releases to soil					
	oosure is driven by freshwater [TCR1a].				
	olved substance to or recover from onsite wa	stewater [ICR14].			
	No wastewater treatment required [TCR6]. Treat air emission to provide a typical removal efficiency of (%) 80				
	or to receiving water discharge) to provide	80 0			
the required removal efficien		0			
	ewage treatment plant, provide the required	0			
onsite wastewater removal e	0				
	prevent/limit release from site				
	e to natural soils [OMS2]. Sludge should be	incinerated contained or			
reclaimed [OMS3].					
	related to municipal sewage treatment pla	ant			
	· · · · · · · · · · · · · · · · · · ·				
Estimated substance removal from wastewater via domestic sewage 94.7 treatment (%)					
Total efficiency of removal fr (domestic treatment plant) R	94.7				
Maximum allowable site toni wastewater treatment remov	4.1e6				
Assumed domestic sewage		2000			
Conditions and measures related to external treatment of waste for disposal					
	relation to external treatment of waste lor	4100000			

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].

Additional information on the basis for the allocation of the indentified OCs and RMMs is contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" worksheet.

Section 3 Exposure Estimation

3.1. Health

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. G21.

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. <u>G23</u>.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.18.2 Exposure Estimation

9.18.2.1 Human Health

See Appendix 2.a and 2.b.

9.18.2.2 Environment

9.19 Use of Kerosine as Release Agents or Binders – Professional

9.19.1 Exposure Scenario

9.19.1 Exposure Scenario			
Section 1 Exposure Scenario Title Kerosine			
Title Use as Release Agents or Binders			
Use Descriptor		00	
Sector(s) of Use		22	
Process Categories		1, 2, 3, 4, 6, 8a, 8b, 10, 11, 14	
		Further information on the mapping and allocation of PROC codes is contained in Table 9.1	
Environmental Release Cate	aories	8a, 8d	
Specific Environmental Rele		ESVOC SpERC 8.10b.v1	
-		E3700 SpErc 8.100.71	
Processes, tasks, activities	s covereu nd roloaso agonte i	ncluding material transfers, mixing, application by	
spraying, brushing and hand		nciuding material transfers, mixing, application by	
Assessment Method	ining of waste.		
See Section 3.			
Section 2 Operational con	ditions and risk m	anagement measures	
		lanagement measures	
Section 2.1 Control of wor	ker exposure		
Product characteristics			
Physical form of product	Liquid		
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .	
Concentration of substance		e substance in the product up to 100 % (unless stated	
in product	differently) G13		
F	· · · · · · · · · · · · · · · · · · ·		
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2	
use/exposure			
Other Operational	Assumes use at not more than 20°C above ambient temperatures, unless		
Conditions affecting	stated differently. G15. Assumes a good basic standard of occupational		
exposure	hygiene is implemented G1		
Contributing Scenarios	Specific Risk Management Measures and Operating Conditions		
General measures (skin	Avoid direct skin co	ontact with product. Identify potential areas for indirect	
irritants) G19.		gloves (tested to EN374) if hand contact with	
·	substance likely. C	clean up contamination/spills as soon as they occur.	
		amination immediately. Provide basic employee	
	• •	/ minimise exposures and to report any skin effects	
	that may develop.		
		on measures such as impervious suits and face shields	
		uring high dispersion activities which are likely to lead	
CS14 Bulk transfers	to substantial aerosol release e.g. spraying. E4. No other specific measures identified. EI20		
	•		
CS8 Drum/batch transfers	No other specific measures identified. El20		
CS29 mixing operations	No other specific measures identified. El20		
(closed systems)			
CS30 mixing operations	No other specific measures identified. El20		
(open systems)			
CS31 Mould forming	No other specific measures identified. El20		
CS32 Casting operations	No other specific measures identified. El20		
CS33 Machine	No other specific measures identified. EI20		
CS10 Spraying			

CS34 Manual	S34 Manual No other specific measures identified. El20 S10 Manual spraying			
CS13 Manual applications	No other specific measures identified. EI20			
e.g. brushing, rolling				
CS4 Dipping, immersion	No other specific measures identified. EI20			
and pouring	No other specific measures identified. El20			
	the basis for the allocation of the identified	ed OCs and RMMs is		
contained in Appendices				
Section 2.2 Control of env				
Product characteristics				
Substance is complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4a].		
Amounts used				
Fraction of EU tonnage used	d in region	0.1		
Regional use tonnage (tonne	es/year)	8.0e2		
Fraction of Regional tonnage	e used locally	5e-4		
Annual site tonnage (tonnes	/year)	0.4		
Maximum daily site tonnage		1.1		
Frequency and duration of	fuse			
Continuous release [FD2].				
Emission days (days/year)		365		
	influenced by risk management			
Local freshwater dilution fac		10		
Local marine water dilution f		100		
Other given operational co	onditions affecting environmental exposur	e		
Release fraction to air from v	wide dispersive use (regional only)	0.95		
	ter from wide dispersive use	0.025		
	wide dispersive use (regional only)	0.025		
	measures at process level (source) to pre-			
	oss sites thus conservative process release e			
	is and measures to reduce or limit dischar			
releases to soil		5,		
Risk from environmental exp	posure is driven by freshwater [TCR1a].			
No wastewater treatment required [TCR6]. Treat air emission to provide a typical removal efficiency of (%) N/A				
	or to receiving water discharge) to provide	0		
the required removal efficier		0		
	ewage treatment plant, provide the required	0		
onsite wastewater removal e				
	prevent/limit release from site			
,	e to natural soils [OMS2]. Sludge should be	incinerated, contained or		
reclaimed [OMS3].	related to municipal sewage treatment pla	ant		
Conditions and measures	related to municipal sewage treatment pla			
Estimated substance removal from wastewater via domestic sewage 94.7				
reatment (%)				
Total efficiency of removal from wastewater after onsite and offsite 94.7				
(domestic treatment plant) RMMs (%) Maximum allowable site tonnage (M _{Safe}) based on release following total 130				
Maximum allowable site tonnage (M _{Safe}) based on release following total 130 wastewater treatment removal (kg/d)				
Assumed domestic sewage treatment plant flow (m ³ /d) 2000				
	related to external treatment of waste for			
	osal of waste should comply with applicable lo			
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].

Additional information on the basis for the allocation of the indentified OCs and RMMs is contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" worksheet.

Section 3 Exposure Estimation

3.1. Health

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. G21.

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.19.2 Exposure Estimation

9.19.2.1 Human Health

See Appendix 2.a and 2.b.

9.19.2.2 Environment

9.20 Use of Kerosine in Agrochemicals – Professional

9.20.1 Exposure Scenario

Section 1 Exposure Scena			
Title			
Use in Agrochemicals			
Use Descriptor			
Sector(s) of Use		22	
Process Categories		1, 2, 4, 8a, 8b, 11, 13 Further information on the mapping and allocation of PROC codes is contained in Table 9.1	
Environmental Release Cate	egories	8a, 8d	
Specific Environmental Rele	ase Category	ESVOC SpERC 8.11a.v1	
Processes, tasks, activities	s covered		
		n by manual or machine spraying, smokes and fogging;	
including equipment clean-d			
Assessment Method	•		
See Section 3.			
Section 2 Operational con	ditions and risk m	nanagement measures	
Section 2.1 Control of wor	ker exposure		
Product characteristics			
Physical form of product	Liquid		
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .	
Concentration of substance		e substance in the product up to 100 % (unless stated	
in product	differently) G13		
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) G2		
Other Operational Conditions affecting	Assumes use at not more than 20°C above ambient temperatures, unless stated differently. G15. Assumes a good basic standard of occupational		
exposure	hygiene is implemented G1 Specific Risk Management Measures and Operating Conditions		
Contributing Scenarios	Specific Risk Mar	agement measures and Operating Conditions	
General measures (skin irritants) <mark>G19</mark> .	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with		
		Clean up contamination/spills as soon as they occur.	
		amination immediately. Provide basic employee	
	that may develop.	/ minimise exposures and to report any skin effects	
CS22 Transfer from/pouring from containers	No other specific measures identified. El20		
CS23 Mixing in containers	No other specific measures identified. EI20		
CS24 Spraying/fogging by	No other specific measures identified. EI20		
manual application			
CS25 Spraying/fogging by	No other specific measures identified. EI20		
machine application			
CS27 Ad hoc manual	No other specific measures identified. EI20		
application via trigger			
sprays, dipping, etc.			
CS39 Equipment cleaning	No other specific measures identified. El20		
and maintenance			
	No other specific measures identified. El20		
Additional information on the basis for the allocation of the identified OCs and RMMs is			
contained in Appendices 1			

Section 2.2 Control of environmental exposure			
Product characteristics			
Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a	1		
Amounts used].		
	0.1		
Fraction of EU tonnage used in region	0.1		
Regional use tonnage (tonnes/year)	3.1e2		
Fraction of Regional tonnage used locally	0.002		
Annual site tonnage (tonnes/year)	6.2e-1		
Maximum daily site tonnage (kg/day)	1.7		
Frequency and duration of use			
Continuous release [FD2].			
Emission days (days/year)	365		
Environmental factors not influenced by risk management			
Local freshwater dilution factor	10		
Local marine water dilution factor	100		
Other given operational conditions affecting environmental exposur	e		
Release fraction to air from wide dispersive use (regional only)	0.9		
Release fraction to wastewater from wide dispersive use	0.01		
Release fraction to soil from wide dispersive use (regional only)	0.09		
Technical conditions and measures at process level (source) to prev	vent release		
Common practices vary across sites thus conservative process release e	stimates used [TCS1].		
Technical onsite conditions and measures to reduce or limit dischar			
releases to soil			
Risk from environmental exposure is driven by freshwater [TCR1a].			
No wastewater treatment required [TCR6].			
Treat air emission to provide a typical removal efficiency of (%)	N/A		
Treat onsite wastewater (prior to receiving water discharge) to provide	0		
the required removal efficiency \geq (%)	0		
discharging to domestic sewage treatment plant, provide the required 0			
onsite wastewater removal efficiency of ≥ (%) Organisation measures to prevent/limit release from site			
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be	incinerated contained or		
reclaimed [OMS3].	incinctated, contained of		
Conditions and measures related to municipal sewage treatment pla	int		
· · · ·			
Estimated substance removal from wastewater via domestic sewage	94.7		
treatment (%)			
Total efficiency of removal from wastewater after onsite and offsite	94.7		
(domestic treatment plant) RMMs (%)	0.4-0		
D (edite) D	2.1e2		
wastewater treatment removal (kg/d) Assumed domestic sewage treatment plant flow (m ³ /d)	2000		
Conditions and measures related to external treatment of waste for			
External treatment and disposal of waste should comply with applicable lo regulations [ETW3].	ocal and/or national		
Conditions and measures related to external recovery of waste			
External recovery and recycling of waste should comply with applicable lo	ocal and/or national		
regulations [ERW1].	ind OCo and BMMs is		
Additional information on the basis for the allocation of the indentificantained in Petrorick file in UICLID Section 13 - "LocalCSP" works			
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works Section 3 Exposure Estimation			
3.1. Health			
The ECETOC TRA tool has been used to estimate workplace exposures	unless otherwise indicated		
G21.			

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.20.2 Exposure Estimation

9.20.2.1 Human Health

See Appendix 2.a and 2.b.

9.20.2.2 Environment

9.21 Use of Kerosine in Agrochemicals – Consumer

9.21.1 Exposure Scenario

	posure Scena	ario Title Kerosine			
Title					
Use in Agroch					
Use Descript					
Sector(s) of U			21		
Product Cate	gories		12, 22, 27		
			Further information on the mapping and allocation of		
			PC codes is contained in Table 1.		
	I Release Cate		8a, 8d		
Specific Envir	onmental Rele	ase Category	ESVOC SpERC 8.11b.v1		
Processes, ta	asks, activitie	s covered			
			quid and solid forms.		
Assessment		•			
See Section 3					
		ditions and risk m	nanagement measures		
Section 2 Of		iuitions and fisk if	lanagement measures		
Section 2.1	Control of cor	nsumer exposure			
Product chara					
Physical form		liquid			
Vapour press			ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .		
			stated, cover concentrations up to 50% [ConsOC1]		
in product					
Amounts used	4	l Inless otherwise s	stated covers use amounts up to50g [ConsOC2]:		
Amounts used	J	Unless otherwise stated, covers use amounts up to50g [ConsOC2]; covers skin contact area up to 857.5cm2 [ConsOC5]			
Frequency an	d duration of		Inless otherwise stated, covers use frequency up to 1 times per day		
use/exposure			nsOC4]; covers exposure up to 0.5 hours per event [ConsOC14]		
Other Operati			stated assumes use at ambient temperatures		
Conditions aff		IConsOC151 assu	mes use in a 20 m^3 room [ConsOC11]; assumes use		
exposure	ooting	with typical ventilat			
	aorv		nagement Measures and Operating Conditions		
Product Category Specific Risk Management Measures and Operating Conditio		agement model to and operating conditions			
	•				
PC12:Fertiliz	OC	Unless otherwise s	stated, covers concentrations up to 50% [ConsOC1];		
ersLawn		covers use up to 3	65 days/year[ConsOC3]; covers use up to 1 time/on		
and garden			C4]; covers skin contact area up to 857.50 cm2		
preparations			ch use event, assumes swallowed amount of 0.3g		
			ach use event, covers use amounts up to 50g		
			s outdoor use [ConsOC12]; covers use in room size of		
]; for each use event, covers exposure up to		
		0.50hr/event[Cons			
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]			
PC22_n	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];			
Lawn and		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on			
garden		day of use[ConsOC4]; covers skin contact area up to 857.50 cm2			
preparations			ch use event, assumes swallowed amount of 0.3g		
			ach use event, covers use amounts up to 50g		
			s outdoor use [ConsOC12]; covers use in room size of		
]; for each use event, covers exposure up to		
		0.50hr/event[Cons			
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]			
PC27_n:	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1];			
Plant		covers use up to 365 days/year[ConsOC3]; covers use up to 4 times/day			

L 1					
protection		of use[ConsOC4]; for each use event, cover			
products,		[ConsOC2]; covers use under typical house			
instant action (pump action		covers use in room size of 20m3[ConsOC11 exposure up to 0.25hr/event[ConsOC14];	J, for each use event, covers		
	RMM	No specific RMMs identified beyond those OCs stated [ConsRMM15]			
spiays)					
PC27_n:	OC	Unless otherwise stated, covers concentration	ons up to 10% [ConsOC1];		
Plant		covers use up to 365 days/year[ConsOC3];	covers use up to 1 time/on		
protection		day of use[ConsOC4]; covers skin contact a	rea up to 35.70 cm2		
products,		[ConsOC5]; for each use event, covers use			
continuous		[ConsOC2]; covers use under typical house			
action (solid		covers use in room size of 20m3[ConsOC11]; for each use event, covers		
and liquid)		exposure up to 8.00hr/event[ConsOC14];			
	RMM OC	No specific RMMs identified beyond those C			
PC27_n:		Unless otherwise stated, covers concentration			
Plant		covers use up to 110 days/year[ConsOC3];			
protection products,		day of use[ConsOC4]; covers skin contact a [ConsOC5]; for each use event, covers use			
aerosol spray		[ConsOC2]; covers use under typical house			
applications		covers use in room size of 20m3[ConsOC11			
applications		exposure up to 4.00hr/event[ConsOC14];	j, for each use event, covers		
	RMM	No specific RMMs identified beyond those C	Cs stated [ConsRMM15]		
		the basis for the allocation of the identifie			
contained in					
		vironmental exposure			
Product char	acteristics				
Substance is o	complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4a].		
Amounts use	d				
Fraction of EU	tonnage used	d in region	0.1		
Regional use	tonnage (tonne	es/year)	3.1e2		
Fraction of Re	gional tonnage	e used locally	0.002		
Annual site to	nnage (tonnes	/year)	0.62		
Maximum dail	y site tonnage	(kg/day)	1.7		
Frequency ar		fuse			
Continuous re					
Emission days			365		
		influenced by risk management			
Local freshwa			10		
Local marine			100		
Other given o	perational co	onditions affecting environmental exposur	e		
Release fraction	on to air from	wide dispersive use (regional only)	0.9		
Release fraction to wastewater from wide dispersive use 0.01					
	Release fraction to soil from wide dispersive use (regional only) 0.09 Conditions and measures related to municipal sewage treatment plant				
			un		
Risk from environmental exposure is driven by freshwater [STP7a]. Estimated substance removal from wastewater via domestic sewage 94.7					
	treatment (%)				
Maximum allowable site tonnage (M _{Safe}) based on release following total 2.1e2					
wastewater tre	ewater treatment removal (kg/d)				
Assumed dom	ssumed domestic sewage treatment plant flow (m ³ /d) 2000				
Conditions and measures related to external treatment of waste for disposal					
	•	osal of waste should comply with applicable le	ocal and/or national		
regulations [E					
		related to external recovery of waste	and/or actional		
External recov		ling of waste should comply with applicable lo			

regulations [ERW1].

Additional information on the basis for the allocation of the indentified OCs and RMMs is contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" worksheet.

Section 3 Exposure Estimation

3.1. Health

The ECETOC TRA tool has been used to estimate consumer exposures, consistent with the content of ECETOC Report #107 and the Chapter R15 of the IR&CSA TGD. Where exposure determinants differ to these sources, then they are indicated.

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Predicted exposures are not expected to exceed the applicable consumer reference values when the operational conditions/risk management measures given in section 2 are implemented. G39.

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].

9.21.2 Exposure Estimation

9.21.2.1 Human Health

See Appendix 2.c.

9.21.2.2 Environment

9.22 Use of Kerosine as a Fuel – Industrial

9.22.1 Exposure Scenario

Section 1 Exposure Scena			
Title			
Use as a Fuel			
Use Descriptor			
Sector(s) of Use		3	
Process Categories		1, 2, 3, 8a, 8b, 16	
		Further information on the mapping and allocation of	
		PROC codes is contained in Table 9.1	
Environmental Release Cate		7	
Specific Environmental Rele		ESVOC SpERC 7.12a.v1	
Processes, tasks, activitie	s covered		
		additive components) and includes activities associated	
with its transfer, use, equipm	nent maintenance a	nd handling of waste.	
Assessment Method			
See Section 3.			
Section 2 Operational con	iditions and risk m	anagement measures	
Section 2.1. Control of way	rkar avnaaura		
Section 2.1 Control of wor Product characteristics	rker exposure		
Physical form of product	Liquid		
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .	
Concentration of substance		e substance in the product up to 100 % (unless stated	
in product	differently) G13		
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2	
use/exposure			
Other Operational	Assumes use at not more than 20°C above ambient temperatures, unless		
Conditions affecting	stated differently. G15. Assumes a good basic standard of occupational		
exposure	hygiene is implemented G1 Specific Risk Management Measures and Operating Conditions		
Contributing Scenarios	Specific Risk Mar	agement measures and Operating Conditions	
General measures (skin		ontact with product. Identify potential areas for indirect	
irritants) <mark>G19</mark> .		gloves (tested to EN374) if hand contact with	
		clean up contamination/spills as soon as they occur.	
		amination immediately. Provide basic employee / minimise exposures and to report any skin effects	
	that may develop.		
CS15 General exposures		neasures identified. EI20	
(closed systems)			
GEST_12I Use as a fuel,	No other specific measures identified. EI20		
CS107 (closed systems)			
CS14 Bulk transfers	No other specific measures identified. El20		
CS8 Drum/Batch transfers	No other specific measures identified. EI20		
CS39 Equipment cleaning	No other specific measures identified. EI20		
and maintenance	No other specific p	peasures identified FI20	
	CS85 Bulk Product Storage No other specific measures identified. El20		
contained in Appendices 1 to 3			
Section 2.2 Control of environmental exposure			
Product characteristics			

Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a	ı].
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	5.5e5
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	5.5e5
Maximum daily site tonnage (kg/day)	1.8e6
Frequency and duration of use	1.000
Continuous release [FD2].	
Emission days (days/year)	300
Environmental factors not influenced by risk management	500
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposu	re
Release fraction to air from process (initial release prior to RMM)	5.0e-3
Release fraction to wastewater from process (initial release prior to	0.00001
RMM) Release fraction to soil from process (initial release prior to RMM)	0
Technical conditions and measures at process level (source) to pre	vent release
Common practices vary across sites thus conservative process release e	
Technical onsite conditions and measures to reduce or limit discha	
releases to soil	
Risk from environmental exposure is driven by freshwater sediment [TCF	R1b].
If discharging to domestic sewage treatment plant, no onsite wastewater	
Treat air emission to provide a typical removal efficiency of (%)	95
Treat onsite wastewater (prior to receiving water discharge) to provide	84.6
the required removal efficiency \geq (%)	
If discharging to domestic sewage treatment plant, provide the required	0
onsite wastewater removal efficiency of \geq (%)	
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be reclaimed [OMS3].	incinerated, contained or
Conditions and measures related to municipal sewage treatment pla	ant
Conditions and measures related to municipal sewage treatment pla	
Estimated substance removal from wastewater via domestic sewage	94.7
treatment (%) Total efficiency of removal from wastewater after onsite and offsite	94.7
(domestic treatment plant) RMMs (%)	94.7
Maximum allowable site tonnage (M_{Safe}) based on release following total	5.3e6
wastewater treatment removal (kg/d)	
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	
Combustion emissions limited by required exhaust emission controls [ET	W1]. Combustion emissions
considered in regional exposure assessment [ETW2].	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of the substance is	
Additional information on the basis for the allocation of the indentif contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures G21.	unless otherwise indicated.
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environment	al exposure with the Petrorisk
model [EE2].	•

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.22.2 Exposure Estimation

9.22.2.1 Human Health

See Appendix 2.a and 2.b.

9.22.2.2 Environment

9.23 Use of Kerosine as a Fuel – Professional

9.23.1 Exposure Scenario

Section 1 Exposure Scena			
Title			
Use as a Fuel			
Use Descriptor			
Sector(s) of Use		22	
Process Categories		1, 2, 3, 8a, 8b, 16	
1 Tocess Categories		Further information on the mapping and allocation of	
		PROC codes is contained in Table 9.1	
Environmental Release Cate	gories	9a, 9b	
Specific Environmental Rele		ESVOC SpERC 9.12b.v1	
Processes, tasks, activitie			
Covers the use as a fuel (or	fuel additives and a	additive components) and includes activities associated	
with its transfer, use, equipm			
Assessment Method			
See Section 3.			
Section 2 Operational con	ditions and risk m	nanagement measures	
Section 2.1 Control of wor	rker exposure		
Product characteristics			
Physical form of product	Liquid		
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .	
Concentration of substance		e substance in the product up to 100 % (unless stated	
in product	differently) G13		
Frequency and duration of	Cavara daily avrag	ourse up to 0 hours (upless stated differently) 00	
Frequency and duration of use/exposure	Covers daily expos	sures up to 8 hours (unless stated differently) G2	
Other Operational	Assumes use at no	ot more than 20°C above ambient temperatures, unless	
Conditions affecting	stated differently. G15. Assumes a good basic standard of occupational		
exposure	hygiene is implemented G1		
Contributing Scenarios	Specific Risk Management Measures and Operating Conditions		
-			
Concret magging (alvin	Avaid direct alian	entert with product. Identify potential grace for indirect	
General measures (skin irritants) G19.	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with		
initalits) 019.		Clean up contamination/spills as soon as they occur.	
		amination immediately. Provide basic employee	
		/ minimise exposures and to report any skin effects	
	that may develop.		
CS15 General exposures	No other specific measures identified. El20		
(closed systems)	· · · · · · · · · · · · · · · · · · ·		
GEST_12I Use as a fuel,	No other specific measures identified. EI20		
CS107 (closed systems)			
CS14 Bulk transfers	No other specific measures identified. EI20		
	No other specific measures identified. EI20		
from containers			
CS39 Equipment cleaning	No other specific measures identified. El20		
and maintenance			
	orage No other specific measures identified. El20		
Additional information on the basis for the allocation of the identified OCs and RMMs is			
contained in Appendices 1 to 3 Section 2.2 Control of environmental exposure			
Product characteristics			

Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a	ı].
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	4.4e6
Fraction of Regional tonnage used locally	5.0e-4
Annual site tonnage (tonnes/year)	2.2e3
Maximum daily site tonnage (kg/day)	6.1e3
Frequency and duration of use	0.100
Continuous release [FD2].	
Emission days (days/year)	365
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposu	
Release fraction to air from wide dispersive use (regional only)	1.0e-3
Release fraction to wastewater from wide dispersive use	0.00001
Release fraction to soil from wide dispersive use (regional only)	0.00001
Technical conditions and measures at process level (source) to pre	vent release
Common practices vary across sites thus conservative process release e	estimates used [TCS1].
Technical onsite conditions and measures to reduce or limit discha	
releases to soil	
Risk from environmental exposure is driven by freshwater [TCR1a].	
No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	N/A
Treat onsite wastewater (prior to receiving water discharge) to provide	0
the required removal efficiency \geq (%)	
If discharging to domestic sewage treatment plant, provide the required	0
onsite wastewater removal efficiency of \geq (%)	
Organisation measures to prevent/limit release from site Do not apply industrial sludge to natural soils [OMS2]. Sludge should be	incinerated contained or
reclaimed [OMS3].	incinerated, contained of
Conditions and measures related to municipal sewage treatment pla	ant
Estimated substance removal from wastewater via domestic sewage	94.7
treatment (%)	04.7
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	94.7
Maximum allowable site tonnage (M _{Safe}) based on release following total	6.9e5
wastewater treatment removal (kg/d)	
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	
Combustion emissions limited by required exhaust emission controls [ET	W1]. Combustion emissions
considered in regional exposure assessment [ETW2].	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of the substance is	
Additional information on the basis for the allocation of the indentif contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures	unless otherwise indicated.
<u>G21.</u>	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environment model [EE2].	al exposure with the Petrorisk

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.23.2 Exposure Estimation

9.23.2.1 Human Health

See Appendix 2.a and 2.b.

9.23.2.2 Environment

9.24 Use of Kerosine as a Fuel – Consumer

9.24.1 Exposure Scenario

Section 1 Exposure Scenario Title Kerosine				
	posure Scena	ario Title Kerosine		
Title				
Use as a Fuel				
Use Descript	or			
Sector(s) of U	se		21	
Product Cated	ories		13	
			Further information on the mapping and allocation of	
			PC codes is contained in Table 1.	
Environmenta	I Release Cate	egories	9a, 9b	
	onmental Rele		ESVOC SpERC 9.12c.v1	
Processes, ta		• •	· · · · · · · · · · · · · · · · · · ·	
	mer uses in fu			
Assessment				
See Section 3				
Section 2 Op	perational con	ditions and risk m	nanagement measures	
		sumer exposure		
Product char	acteristics			
Physical form	of product	liquid		
Vapour pressu	ure	Liquid, vapour pres	ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .	
Concentration	of substance	Unless otherwise s	stated, cover concentrations up to 100% [ConsOC1]	
in product				
Amounts used	ł	Unless otherwise s	stated, covers use amounts up to50000g [ConsOC2];	
			t area up to 420cm2 [ConsOC5]	
Frequency and	d duration of		stated, covers use frequency up to 0.143 times per day	
use/exposure			s exposure up to 2 hours per event [ConsOC14]	
Other Operation	onal		stated assumes use at ambient temperatures	
Conditions aff			mes use in a 20 m ³ room [ConsOC11]; assumes use	
		with typical ventilat		
Product Cate	aorv		nagement Measures and Operating Conditions	
	<u> </u>		······································	
	r			
PC13:Fuels	OC		stated, covers concentrations up to 100% [ConsOC1];	
Liquid -:			2 days/year[ConsOC3]; covers use up to 1 time/on day	
Automotive			covers skin contact area up to 210.00 cm2 [ConsOC5];	
Refuelling			, covers use amounts up to 50000g [ConsOC2]; covers	
			OC12]; covers use in room size of 100m3[ConsOC11];	
			c, covers exposure up to 0.05hr/event[ConsOC14];	
	RMM	No specific RMMs	developed beyond those OCs stated	
PC13:Fuels	OC	Unless otherwise s	stated, covers concentrations up to 100% [ConsOC1];	
Liquid - home		covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on		
heating fuel			C4]; covers skin contact area up to 210.00 cm2	
Josef Street			ch use event, covers use amounts up to 1500g	
			s use under typical household ventilation [ConsOC8];	
			n size of 20m3[ConsOC11]; for each use event, covers	
			3hr/event[ConsOC14];	
	RMM	No specific RMMs developed beyond those OCs stated		
PC13:Fuels	OC	Unless otherwise stated, covers concentrations up to 100% [ConsOC1];		
Liquid -		covers use up to 26 days/year[ConsOC3]; covers use up to 1 time/on day		
Garden		of use[ConsOC4]; for each use event, covers use amounts up to 1000g		
Equipment -		[ConsOC2]; covers outdoor use [ConsOC12]; covers use in room size of		
Use]; for each use event, covers exposure up to	
		2.00hr/event[Cons		
L		2.00111/07/0112/0013	~~··])	

	RMM	No specific RMMs developed beyond those	OCs stated	
PC13:Fuels	OC	Unless otherwise stated, covers concentration		
Liquid :	00	covers use up to 26 days/year[ConsOC3]; c		
Garden		of use[ConsOC4]; covers skin contact area		
Equipment -		for each use event, covers use amounts up		
Refuelling		use in a one car garage (34m3) under typica		
		covers use in room size of 34m3[ConsOC11		
		exposure up to 0.03hr/event[ConsOC14];		
	RMM	No specific RMMs developed beyond those	OCs stated	
Additional in	formation on	the basis for the allocation of the identifie	d OCs and RMMs is	
	Appendices 1			
Section 2.2 C	Control of env	rironmental exposure		
Product char	acteristics			
Substance is o	complex UVCE	3 [PrC3]. Predominantly hydrophobic [PrC4a].	
Amounts use	d			
Fraction of EL	J tonnage used	l in region	0.1	
	tonnage (tones		1.8e5	
-	gional tonnage		0.0005	
	nnage (tonnes		89	
	y site tonnage		245	
	nd duration of		245	
Continuous re		use		
Emission days			365	
		influenced by risk management	303	
	ter dilution fac		10	
	water dilution f		100	
		onditions affecting environmental exposur		
Other given c		inditions anecting environmental exposu	C	
Release fracti	on to air from v	wide dispersive use (regional only)	1.0e-3	
Release fraction to wastewater from wide dispersive use 0.00001				
Release fracti	Release fraction to soil from wide dispersive use (regional only) 0.00001			
Conditions and measures related to municipal sewage treatment plant				
		oosure is driven by freshwater [STP7a].		
		al from wastewater via domestic sewage	94.7	
	wable site ton	nage (M _{Safe}) based on release following total	3 1 0 1	
	eatment remov		5.104	
		treatment plant flow (m ³ /d)	2000	
Conditions and measures related to external treatment of waste for disposal				
Combustion emissions limited by required exhaust emission controls [ETW1]. Combustion emissions				
		sure assessment [ETW2].		
		related to external recovery of waste		
This substance is consumed during use and no waste of the substance is generated [ERW3].				
Additional information on the basis for the allocation of the indentified OCs and RMMs is				
contained in	Petrorisk file	in IUCLID Section 13 - "LocalCSR" works	heet.	
	posure Estim	ation		
3.1. Health				
		been used to estimate consumer exposures,		
		he Chapter R15 of the IR&CSA TGD. Where	exposure determinants differ	
3.2. Environn	es, then they a			
		hod has been used to calculate environment	al exposure with the Detrorisk	
model [EE2].			-	
	idance to che	eck compliance with the Exposure Scenar	io	
4.1. Health				

Predicted exposures are not expected to exceed the applicable consumer reference values when the operational conditions/risk management measures given in section 2 are implemented. G39.

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].

9.24.2 Exposure Estimation

9.24.2.1 Human Health

See Appendix 2.c.

9.24.2.2 Environment

9.25 Use of Kerosine as Functional Fluids – Industrial

9.25.1 Exposure Scenario

Section 1 Exposure Scenario Title Kerosine Title Use as Functional Fluids Use Descriptor Sector(s) of Use 3 Process Categories 1, 2, 3, 4, 8a, 8b, 9 Further information on the mapping and allocation of PROC codes is contained in Table 9, 1 Processes, tasks, activities covered Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers Assessment Method See Section 3. Section 2.1 Control of worker exposure Product characteristics Physical form of product Uiquid Vapour pressure (kPa) Liquid Vapour pressure (kPa) Liquid, vapour pressures up to 8 hours (unless stated differently) G2 use/exposure Onderity G13 Frequency and duration of Covers daily exposures up to 8 hours (unless stated differently) G2 use/exposure Onthis affecting Specific Risk Management Measures and Operating Conditions Section 2.1 Cortistuing Scenarios Specific Risk Management	5.25.1 Exposure Scena		
Use as Functional Fluids Use Descriptor Sector(s) of Use Process Categories Product Categ		ario Title Kerosine	
Use Descriptor 3 Sector(s) of Use 3 Process Categories 1, 2, 3, 4, 8a, 8b, 9 Further information on the mapping and allocation of PROC codes is contained in Table 9.1 Environmental Release Categories 7 Specific Environmental Release Category ESVOC SpERC 7.13a.v1 Processes, tasks, activities covered 2 Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers Assessment Method Section 2 Operational conditions and risk management measures Section 2 Operational conditions and risk management measures Product Characteristics Physical form of product Liquid, vapour pressure 0, 5 - 10 kPa at STP. OC4. Concentration of substance Covers percentage substance in the product up to 100 % (unless stated differently) G13 Frequency and duration of userker exposure Assumes use at not more than 20°C above ambient temperatures, unless stated differently. C16 Assumes a good basic standard of occupational hygiene is implemented G1 Contributing Scenarios Specific Risk Management Measures and Operating Conditions General measures (skin contact with product. Identify potential areas for indirect skin contamination immediately. Provide basic employee training to prevent / minimise exposure <td></td> <td></td> <td></td>			
Sector(s) of Use 3 Process Categories 1, 2, 3, 4, 8a, 8b, 9 Further information on the mapping and allocation of PROC codes is contained in Table 9.1 Environmental Release Categories 7 Specific Environmental Release Category ESVOC SpERC 7.13a.v1 Processes, tasks, activities covered 1000000000000000000000000000000000000			
Process Categories 1, 2, 3, 4, 8a, 8b, 9 Further information on the mapping and allocation of PROC codes is contained in Table 9, 1 Environmental Release Categories 7 Specific Environmental Release Category ESVOC SpERC 7.13a.v1 Processes, task, activities covered ESVOC SpERC 7.13a.v1 Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers Assessment Method See Section 3. Section 2 Operational conditions and risk management measures Section 2 Operational conditions and risk management measures Section 3. Product Characteristics Physical form of product Liquid, vapour pressure 0.5 - 10 kPa at STP. OC4. Concentration of substance Covers percentage substance in the product up to 100 % (unless stated differently) G13 Frequency and duration of uselexposure Assumes use at not more than 20°C above ambient temperatures, unless stated differently. G15 Assumes a good basic standard of occupational hygiene is implemented G1 Contributing Scenarios Specific Risk Management Measures and Operating Conditions General measures (skin initiator) G19. Avoid direct skin contact with product. Identify potential areas for indirect skin contact with product. Identify potential areas for indirect skin contact interes identified. E120	-		
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articles/equipment, CS107 closed systemsNo other specific measures identified. El20CS45 Filling/ preparation of equipment from drums or containersNo other specific measures identified. El20CS15 General exposures (closed systems)No other specific measures identified. El20CS16 General exposures (opens systems)No other specific measures identified. El20CS19 Remanufacture ofNo other specific measures identified. El20	CS84 Filling		
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CS16 General exposures (opens systems) No other specific measures identified. El20 CS19 Remanufacture of No other specific measures identified. El20			
(opens systems) Image: CS19 Remanufacture of Systems identified. El20		No other specific n	neasures identified. EI20
CS19 Remanufacture of No other specific measures identified. El20			
reject articles		No other specific n	neasures identified. El20
	reject articles		

regulations [ERW1].

Additional information on the basis for the allocation of the indentified OCs and RMMs is contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" worksheet.

Section 3 Exposure Estimation

3.1. Health

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. G21.

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.25.2 Exposure Estimation

9.25.2.1 Human Health

See Appendix 2.a and 2.b.

9.25.2.2 Environment

9.26 Use of Kerosine in Road and Construction Applications – Professional

9.26.1 Exposure Scena			
Section 1 Exposure Scena	ario Title Kerosine		
Title			
Use in Road and Construction	on Applications		
Use Descriptor			
Sector(s) of Use		22	
Process Categories		8a, 8b, 9, 10, 11, 13	
C C		Further information on the mapping and allocation of	
		PROC codes is contained in Table 9.1	
Environmental Release Cate	egories	8d, 8f	
Specific Environmental Rele	ase Category	ESVOC SpERC 8.15.v1	
Processes, tasks, activitie	s covered		
		oad and construction activities, including paving uses,	
		and water-proofing membranes.	
Assessment Method			
See Section 3.			
Section 2 Operational con	ditions and risk m	nanagement measures	
Section 2.1 Control of wor	ker exposure		
Product characteristics			
Physical form of product	Liquid		
Vapour pressure (kPa)		ssure 0.5 - 10 kPa at STP. OC4.	
		e substance in the product up to 100 % (unless stated	
in product	differently) G13		
	,		
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2	
use/exposure			
Other Operational	Assumes use at not more than 20°C above ambient temperatures, unless		
Conditions affecting		G15. Assumes a good basic standard of occupational	
exposure	hygiene is implemented G1		
Contributing Scenarios	Specific Risk Mar	nagement Measures and Operating Conditions	
General measures (skin	Avoid direct skin o	ontact with product. Identify potential areas for indirect	
irritants) G19		gloves (tested to EN374) if hand contact with	
		Clean up contamination/spills as soon as they occur.	
	Wash off skin contamination immediately. Provide basic employee		
training to prevent / minimise exposures and to report any skin effects			
	that may develop.		
CS8 Drum/batch transfers.	No other specific measures identified. El20		
CS82 Non-dedicated facility			
CS13 Manual applications	No other specific measures identified. EI20		
e.g. brushing rolling.			
CS25 Spraying/fogging by	No other specific measures identified. EI20		
machine application.			
CS111 Elevated			
temperature.			
CS4 Dipping, immersion	No other specific n	neasures identified. EI20	
and pouring.			
CS39 Equipment cleaning	No other specific n	neasures identified. EI20	
and maintenance.			
		allocation of the identified OCs and RMMs is	
contained in Appendices	10.5		

9.26.1 Exposure Scenario

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Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a	1
Amounts used].
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	5.1e3
	5e-4
Fraction of Regional tonnage used locally	
Annual site tonnage (tonnes/year)	2.5
Maximum daily site tonnage (kg/day)	7.0
Frequency and duration of use	
Continuous release [FD2].	0.05
Emission days (days/year)	365
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposur	e
Release fraction to air from wide dispersive use (regional only)	0.95
Release fraction to wastewater from wide dispersive use	0.01
Release fraction to soil from wide dispersive use (regional only)	0.04
Technical conditions and measures at process level (source) to prev	vent release
Common practices vary across sites thus conservative process release e	stimates used [TCS1].
Technical onsite conditions and measures to reduce or limit dischar	ges, air emissions and
releases to soil	
Risk from environmental exposure is driven by freshwater [TCR1a].	
No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	N/A
Treat onsite wastewater (prior to receiving water discharge) to provide	0
the required removal efficiency \geq (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of \geq (%)	0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be	incinerated contained or
reclaimed [OMS3].	incinerated, contained of
Conditions and measures related to municipal sewage treatment pla	int
Estimated substance removal from wastewater via domestic sewage	94.7
treatment (%)	
Total efficiency of removal from wastewater after onsite and offsite	94.7
(domestic treatment plant) RMMs (%)	
D (edite) D	780
wastewater treatment removal (kg/d)	2000
Assumed domestic sewage treatment plant flow (m ³ /d)	2000
Conditions and measures related to external treatment of waste for	
External treatment and disposal of waste should comply with applicable lo regulations [ETW3].	ocal and/or national
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable lo regulations [ERW1].	ocal and/or national
Additional information on the basis for the allocation of the indentifi	ied OCs and RMMs is
contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" works	
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures	unless otherwise indicated.
G21.	

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.26.2 Exposure Estimation

9.26.2.1 Human Health

See Appendix 2.a and 2.b.

9.26.2.2 Environment

9.27 Use of Kerosine in Explosives Manufacture and Use – Professional

9.27.1 Exposure Scenario

Section 1 Exposure Scenario Title Kerosine			
Title			
Explosives Manufacture and	USE		
Use Descriptor			
Sector(s) of Use		22	
Process Categories		1, 3, 5, 8a, 8b	
		Further information on the mapping and allocation of	
		PROC codes is contained in Table 9.1	
Environmental Release Cate		8e	
Specific Environmental Rele	0,	Not Applicable	
Processes, tasks, activitie			
		and use of slurry explosives (including materials	
transfer, mixing and charging	g) and equipment c	leaning	
Assessment Method			
See Section 3.			
Section 2 Operational con	ditions and risk m	nanagement measures	
Section 2.1 Control of wor	rker exposure		
Product characteristics			
Physical form of product	Liquid		
Vapour pressure (kPa)	Liquid, vapour pres	ssure 0.5 - 10 kPa at STP. <mark>OC4</mark> .	
Concentration of substance	Covers percentage	e substance in the product up to 100 % (unless stated	
in product	differently) G13		
Frequency and duration of	Covers daily expos	sures up to 8 hours (unless stated differently) G2	
use/exposure			
Other Operational	Assumes use at not more than 20°C above ambient temperatures, unless		
Conditions affecting	stated differently.	G15. Assumes a good basic standard of occupational	
exposure	hygiene is implemented G1		
Contributing Scenarios	Specific Risk Mar	nagement Measures and Operating Conditions	
General measures (skin	Avoid direct skip o	ontact with product. Identify potential areas for indirect	
irritants) G19.		gloves (tested to EN374) if hand contact with	
intants) 619.			
substance likely. Clean up contamination/spills as soo			
	Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects		
	that may develop.		
CS15 General exposures		neasures identified. EI20	
(closed systems)			
CS14 Bulk transfers. CS81	No other specific n	neasures identified. El20	
Dedicated facility.			
CS14 Bulk transfers. CS82	No other specific n	neasures identified. El20	
non-dedicated.			
CS23 Mixing in containers	No other specific n	neasures identified. El20	
CS22 Transfer from /		neasures identified. El20	
pouring from containers.			
CS81 Dedicated facility.			
CS22 Transfer from /	No other specific n	neasures identified. El20	
pouring from containers.			
CS82 Non-dedicated			
facility.			
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CS8 Drum/batch transfers	No other specific measures identified. EI20			
CS39 Equipment cleaning and maintenance	No other specific measures identified. EI20			
CS85 Bulk Product Storage	No other specific measures identified. EI20			
Additional information on	the basis for the allocation of the identified	ed OCs and RMMs is		
contained in Appendices Section 2.2 Control of env				
	vironmental exposure			
Product characteristics	D (D-00) Desidencia estis hadres habis (D-04)	1		
	B [PrC3]. Predominantly hydrophobic [PrC4a	i].		
Amounts used				
Fraction of EU tonnage used	-	0.1		
Regional use tonnage (tonn		1.2e3		
Fraction of Regional tonnag		5e-4		
Annual site tonnage (tonnes		0.62		
Maximum daily site tonnage		1.7		
Frequency and duration o	fuse			
Continuous release [FD2].				
Emission days (days/year)		365		
	t influenced by risk management			
Local freshwater dilution fac		10		
Local marine water dilution f		100		
Other given operational co	onditions affecting environmental exposu	re		
Release fraction to air from	wide dispersive use (regional only)	0.001		
	ater from wide dispersive use	0.02		
Release fraction to soil from wide dispersive use (regional only) 0.01				
	measures at process level (source) to pre	vent release		
	oss sites thus conservative process release			
Technical onsite condition	ns and measures to reduce or limit discha			
releases to soil				
	posure is driven by freshwater [TCR1a].			
	No wastewater treatment required [TCR6]. Treat air emission to provide a typical removal efficiency of (%) N/A			
Treat onsite wastewater (pri	N/A 0			
the required removal efficier	0			
If discharging to domestic se	0			
onsite wastewater removal e		č		
	prevent/limit release from site			
	ge to natural soils [OMS2]. Sludge should be	incinerated, contained or		
reclaimed [OMS3].				
Conditions and measures	related to municipal sewage treatment pla	ant		
Estimated substance remov	al from wastewater via domestic sewage	94.7		
treatment (%)	al nom wastewater via domestic sewage	94.7		
	rom wastewater after onsite and offsite	94.7		
(domestic treatment plant) F				
Maximum allowable site ton	200			
wastewater treatment remov				
Assumed domestic sewage treatment plant flow (m ³ /d) 2000				
Conditions and measures	valated to external treatment of waste for	dienneal		
	related to external treatment of waste for			
External treatment and disp	osal of waste should comply with applicable l			
External treatment and disport regulations [ETW3].	osal of waste should comply with applicable I			
External treatment and disport regulations [ETW3]. Conditions and measures		ocal and/or national		

regulations [ERW1].

Additional information on the basis for the allocation of the indentified OCs and RMMs is contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" worksheet.

Section 3 Exposure Estimation

3.1. Health

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. G21.

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Risk Management Measures are based on qualitative risk characterisation. G37.

Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38.

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]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3].

9.27.2 Exposure Estimation

9.27.2.1 Human Health

See Appendix 2.a and 2.b.

9.27.2.2 Environment

9.28 Regional Environment Exposure Estimation

10 RISK CHARACTERISATION

10.1 Manufacture of Substance – Industrial

10.1.1 Human Health

See Appendix 3.a. and 3.b.

10.1.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.2 Use of Substance as Intermediate – Industrial

10.2.1 Human Health

See Appendix 3.a. and 3.b.

10.2.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.3 Distribution of Substance – Industrial

10.3.1 Human Health

See Appendix 3.a. and 3.b.

10.3.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.4 Formulation & (Re)packing of Substances and Mixtures – Industrial

10.4.1 Human Health

See Appendix 3.a. and 3.b.

10.4.2 Environment

10.5 Uses in Coatings – Industrial

10.5.1 Human Health

See Appendix 3.a. and 3.b.

10.5.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.6 Uses in Coatings – Professional

10.6.1 Human Health

See Appendix 3.a. and 3.b.

10.6.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.7 Uses in Coatings – Consumer

10.7.1 Human Health

See Appendix 3.c.

10.7.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.8 Use in Cleaning Agents – Industrial

10.8.1 Human Health

See Appendix 3.a. and 3.b.

10.8.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.9 Use in Cleaning Agents – Professional

10.9.1 Human Health

See Appendix 3.a. and 3.b.

10.9.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.10 Use in Cleaning Agents – Consumer

10.10.1 Human Health

See Appendix 3.c.

10.10.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.11 Lubricants – Industrial

10.11.1 Human Health

See Appendix 3.a. and 3.b.

10.11.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.12 Lubricants – Professional: Low Environmental Release

10.12.1 Human Health

See Appendix 3.a. and 3.b.

10.12.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.13 Lubricants – Professional: High Environmental Release

10.13.1 Human Health

See Appendix 3.a. and 3.b.

10.13.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.14 Lubricants – Consumer: Low Environmental Release

10.14.1 Human Health

See Appendix 3.c.

10.14.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.15 Lubricants – Consumer: High Environmental Release

10.15.1 Human Health

See Appendix 3.c.

10.15.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.16 Use in Metal Working Fluids/Rolling Oils – Industrial

10.16.1 Human Health

See Appendix 3.a. and 3.b.

10.16.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.17 Use in Metal Working Fluids/Rolling Oils – Professional: High Environmental Release

10.17.1 Human Health

See Appendix 3.a. and 3.b.

10.17.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.18 Use as Release Agents or Binders – Industrial

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10.18.1 Human Health

See Appendix 3.a. and 3.b.

10.18.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.19 Use as Release Agents or Binders – Professional

10.19.1 Human Health

See Appendix 3.a. and 3.b.

10.19.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.20 Use in Agrochemicals – Professional

10.20.1 Human Health

See Appendix 3.a. and 3.b

10.20.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.21 Use in Agrochemicals – Consumer

10.21.1 Human Health

See Appendix 3.c.

10.21.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.22 Use as a Fuel – Industrial

10.22.1 Human Health

See Appendix 3.a. and 3.b.

10.22.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.23 Use as a Fuel – Professional

10.23.1 Human Health

See Appendix 3.a. and 3.b.

10.23.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.24 Use as a Fuel – Consumer

10.24.1 Human Health

See Appendix 3.c.

10.24.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.25 Use as Functional Fluids – Industrial

10.25.1 Human Health

See Appendix 3.a. and 3.b.

10.25.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.26 Use in Road and Construction Applications – Professional

10.26.1 Human Health

See Appendix 3.a. and 3.b.

10.26.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.27 Explosives Manufacture and Use – Professional

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10.27.1 Human Health

See Appendix 3.a. and 3.b.

10.27.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet

10.28 Overall exposure (combined for all relevant emission/release sources)

10.28.1 Human health (combined for all exposure routes)

See Appendix 3a, 3b & 3c.

10.28.2 Environment (combined for all exposure routes)

Combined exposures can be calculated with information provided on the individual exposure scenarios presented in section 9. However, it is unclear how to define risk management measures resulting from this analysis.

10.29 Regional Environment

See PETRORISK file in IUCLID Section 13 - "RegionalCSR" worksheet

APPENDIX 2: Exposure Estimation

Appendix 2a: Exposure Estimation for Kerosine / Worker Tables

Appendix 2b: Qualitative Exposure Estimation for R38 substances

This general qualitative CSA approach aims to reduce/avoid contact or incidents with the substance. However, implementation of risk management measures (RMMs) and operational conditions (OCs) need to be proportional to the degree of concern for the health hazard presented by the substance. Exposures should be controlled to at least the levels that represent an acceptable level of risk, i.e. implementation of the chosen RMMs will ensure that the likelihood of an event occurring due to the hazard of the substance is negligible, and the risk is considered to be controlled to a level of no concern.

For skin irritation a qualitative risk characterisation was conducted. Handling and storage risk management measures that are generally identified for skin irritation and identified in the Table given in Appendix 3.b.

A review of these RMMs indicates that if the user complies with the following generic statements, risks due to skin irritation can be considered to be adequately controlled:

E3: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if direct hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop.

Plus (where there is the potential for additional and significant aerosol exposure, e.g. associated with PROCs 7, 11, 17 or 18):

E4: 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.

Qualitative Exposure Estimation for R65 substances

'Aspiration' means the entry of a liquid substance directly into the trachea and lower respiratory tract. Aspiration of hydrocarbon substances can result in severe acute effects such as chemical pneumonitis, varying degrees of pulmonary injury or death. This property relates to the potential for low viscosity material to spread quickly into the deep lung and cause severe pulmonary tissue damage. Classification of a hydrocarbon substance for aspiration hazard is made on the basis of reliable human evidence or on the basis of physical properties.

The R65 risk phrase (Harmful: may cause lung damage if swallowed) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived.

This general qualitative CSA approach aims to reduce/avoid contact or incidents with the substance. However, implementation of risk management measures (RMMs) and operational conditions (OCs) need to be proportional to the degree of concern for the health hazard presented by the substance. Exposures should be controlled to at least the levels that represent an acceptable level of risk such that the implementation of the chosen RMMs will ensure that the likelihood of an event occurring due to the substance hazard is negligible, and the risk is considered to be controlled to a level of no concern.

There are no routine anticipated exposures by ingestion related to any supported uses of the substance. The risk arising from aspiration hazard is solely related to the physico-chemical properties of the substance. The risk can therefore be controlled by implementing risk

management measures tailored to this specific risk. For any substance, classified as R65, these measures should be communicated via the safety data sheet by use of the following phrase:

• Do not ingest. If swallowed then seek immediate medical assistance.

Furthermore it should be noted that where the substance is sold for use in lamp oils and grill lighters by the general public (Consumers), then these must be visibly, legibly and indelibly marked as follows, in accordance with REACH Annex XVII update of 1.4.2010:

- Keep lamps filled with this liquid out of the reach of children.
- Just a sip of lamp oil or even sucking the wick of lamps may lead to life threatening lung damage.

Appendix 2c: Exposure Estimation for Kerosine / Consumer Tables

APPENDIX 3: Risk Characterisation

Appendix 3a: Risk Characterisation for Kerosine / Worker Tables

Appendix 3b: Qualitative Risk Characterisation for R38 substances

The implementation of relevant RMMs will ensure that the likelihood of an event occurring due to the substance hazard of skin irritation is negligible and the risk is considered to be controlled to a level of no concern.

For the skin irritation (R38) hazard a qualitative risk characterisation has been conducted consistent with the considerations and risk management measures identified in the Table below.

Hazard	Material	Risk / Hazard Phrase	Examples of Relevant S Phrases and P Statements	Components of the Qualitative Risk Assessment
Skin Irritation (R38)	• Liquid	R38 / H315	 S24: Avoid contact with skin Prevention: P264: Wash thoroughly after handling. P280: Wear protective gloves. Response: P280: Wear protective gloves/protect ive clothing/eye protection/fac e protection. P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P321: Specific treatment (see on this label). P332 + P313: If skin irritation occurs: Get medical advice/attenti on. P362 : Take 	 Implementation of basic standards of occupational hygiene; Avoid direct skin contact with product; Wear gloves (tested to EN374) if direct hand contact with the substance is likely; wash off skin contamination immediately; Avoid splashes and spills; Avoid splashes and spills; Avoidance of contact with contaminated tools and objects; Clean up contamination/spills as soon as they occur; Regular cleaning of equipment and work area; Ensure suitable management/supervision is in place to check that the RMMs in place are being used correctly and OCs followed; Train staff on good practice to prevent / minimise exposures and to report any skin problems that may develop; Adopt good standards of personal skin hygiene. Where activities may lead to aerosol release e.g. spraying, then additional skin protection measures such as impervious suits and face shields may be required.

	off contaminated clothing and wash before re-use
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The outcome of the CSA is displayed within the relevant Exposure Scenarios by the inclusion of the general phrase

E3: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if direct hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop.

Together with (where there is the potential for additional and significant aerosol exposure):

E4: 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.

Qualitative Risk Characterisation for R65 substances

The implementation of relevant RMMs will ensure that the likelihood of an event occurring due to the aspiration hazard of the substance is negligible and the risk is considered to be controlled to a level of no concern.

Hazard	Material	Risk / Hazard Phrase	Examples of Relevant S Phrases and P	Components of the Qualitative Risk Assessment
Aspiration Toxicity (R65)	• Liquid	R65 / H304	StatementsResponse:• (S2): Keep out of the reach of children (for dangerous products sold to the general public must include this safety phrase)• S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label• P102: Keep out of reach of children.• P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or	 Worker Do not ingest Implementation of basic standards of occupational hygiene Avoid splashes and spills Avoidance of contact with contaminated tools and objects Management/supervision to check that the RMMs in place are being used correctly and OCs followed Training for staff on good practice Good standard of personal hygiene Consumer Do not ingest For lamp oils and grill lighters, follow the provisions of REACH – Annex XVII, including: Marketing in black opaque containers not exceeding 1 litre

For aspiration hazard a qualitative risk characterisation has been conducted consistent with the considerations and risk management measures identified in the Table below.

Hazard	Material	Risk / Hazard Phrase	Examples of Relevant S Phrases and P Statements	Components of the Qualitative Risk Assessment
			 doctor/physician. P331: Do NOT induce vomiting. Storage: P405: Store locked up. Disposal: P501 : Dispose of contents/containe r to in accordance with local/regional/ national/internatio nal regulations (to be specified) 	- Labelling with specific safe use instruction

For any substance, classified as R65, these risk management measures should be communicated via the safety data sheet by use of the following phrase:

• Do not ingest. If swallowed then seek immediate medical assistance.

Appendix 3c: Risk Characterisation for Kerosine / Consumer Tables