KARTA BEZPEČNOSTNÝCH ÚDAJOV

podľa nariadenia Komisie (EÚ) 2020/878 v znení zmien a doplnení

Technický benzín

Dátum vytvorenia	19. 4. 2018		
Dátum revízie	7. 5. 2024	Číslo verzie	4.0

ODDIEL 1: Identifikácia látky/zmesi a spoločnosti/podniku

1.1. Identifikátor produktu — Technický benzín

Látka / zmes	látka
Číslo	77
Chemický názov	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
Číslo ES (EINECS)	920-750-0
Registračné číslo	01-2119473851-33-0006

1.2. Relevantné identifikované použitia látky alebo zmesi a použitia, ktoré sa neodporúčajú

Identifikované použitia látky

Deskriptory použitia

SU 10	Príprava [miešanie] prípravkov a/alebo ich prebaľovanie (okrem zliatin)
SU 21	Spotrebiteľské použitia: Domácnosti (= široká verejnosť = spotrebitelia)
SU 22	Profesionálne použitia: Široká verejnosť (administratíva, vzdelávanie, zábava, služby, remeslá)
PC 9a	Nátery a farby, riedidlá, odstraňovače náterov
PC 21	Laboratórne chemikálie
PC 35	Produkty na umývanie a čistenie
PROC 8a	Presun látky alebo zmesi (plnenie a vypúšťanie) v neurčených zariadeniach
PROC 8b	Presun látky alebo zmesi (plnenie a vypúšťanie) v určených zariadeniach
PROC 15	Použitie vo forme laboratórneho činidla
ERC 2	Formulovanie do zmesi
AC 0	Iné

Neodporúčané použitia látky

Produkt nesmie byť používaný inými spôsobmi, než ktoré sú uvedené v oddiele 1.

Prílohou karty bezpečnostných údajov je scenár expozície.

1.3. Údaje o dodávateľovi karty bezpečnostných údajov

Následný užívateľ

Meno alebo obchodné meno	ELASTIK spol. s r.o.
Adresa	Hlavná 252/104, Šelpice, 91909 Slovensko
Identifikačné číslo (IČ)	17642108
IČ DPH	SK2020390328
Telefón	00421335903915
E-mail	elastik@elastik.sk
Adresa www stránok	www.elastik.sk

Osoba zodpovedná za kartu bezpečnostných údajov

Meno	ELASTIK spol. s r.o.
E-mail	elastik@elastik.sk

1.4. Núdzové telefónne číslo

NÁRODNÉ TOXIKOLOGICKÉ INFORMAČNÉ CENTRUM, Univerzitná nemocnica Bratislava, pracovisko Kramáre, Klinika pracovného lekárstva a toxikológie; Limbová 5, 833 05 Bratislava, telefón: +421 2 54 774 166, mobil: +421 911 166 066, fax: +421 2 547 74 605, e-mail: ntic@ntic.sk.

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ODDIEL 2: Identifikácia nebezpečnosti

2.1. Klasifikácia látky alebo zmesi

Klasifikácia látky podľa nariadenia (ES) č. 1272/2008

Látka je klasifikovaná ako nebezpečná.

Flam. Liq. 2, H225
Asp. Tox. 1, H304
STOT SE 3, H336
Aquatic Chronic 2, H411

Najzávažnejšie nepriaznivé fyzikálno-chemické účinky

Veľmi horľavá kvapalina a pary.

Najvýznamnejšie nepriaznivé účinky na ľudské zdravie a na životné prostredie

Môže byť smrteľný po požití a vniknutí do dýchacích ciest. Môže spôsobiť ospalosť alebo závraty. Toxický pre vodné organizmy, s dlhodobými účinkami.

2.2. Prvky označovania

Výstražný piktogram



Výstražné slovo

Nebezpečenstvo

Nebezpečná látka

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
(EC: 920-750-0)

Výstražné upozornenia

H225	Veľmi horľavá kvapalina a pary.
H304	Môže byť smrteľný po požití a vniknutí do dýchacích ciest.
H336	Môže spôsobiť ospalosť alebo závraty.
H411	Toxický pre vodné organizmy, s dlhodobými účinkami.

Bezpečnostné upozornenia

P101	Ak je potrebná lekárska pomoc, majte k dispozícii obal alebo etiketu výrobku.
P102	Uchovávajte mimo dosahu detí.
P210	Uchovávajte mimo dosahu tepla, horúcich povrchov, iskier, otvoreného ohňa a iných zdrojov zapálenia. Nefajčite.
P271	Používajte iba na voľnom priestranstve alebo v dobre vetranom priestore.
P301+P310	PO POŽITÍ: Okamžite volajte lekára.
P331	Nevyvolávajte zvracanie.
P403+P235	Uchovávajte na dobre vetranom mieste. Uchovávajte v chlade.
P405	Uchovávajte uzamknuté.
P501	Zneškodnite obsah/nádobu odovzdaním osobe oprávnenej pre nakladanie s odpadmi alebo vrátením dodávateľovi.

Doplňujúce informácie

Hustota	0,710 - 0,780 g/cm³ pri 15 °C
Hraničná hodnota VOC	kat. B (a) : 850 g/l

Požiadavky na uzávery odolné proti otvoreniu deťmi a hmatateľné výstrahy

Obal musí byť opatrený hmatateľnou výstrahou pre nevidomých. Obal musí byť opatrený uzáverom odolným proti otvoreniu deťmi.

2.3. Iná nebezpečnosť

Látka nemá vlastnosti vyvolávajúce narušenie endokrinnej činnosti v súlade s kritériami stanovenými v nariadení Komisie v prenesenej právomoci (EÚ) 2017/2100 alebo v nariadení Komisie (EÚ) 2018/605. Látka nespĺňuje kritéria pre látky PBT alebo vPvB v súlade s prílohou XIII, nariadenia (ES) č. 1907/2006 v znení zmien a doplnení.

ODDIEL 3: Zloženie/informácie o zložkách

3.1. Látky

Chemická charakteristika

Nižšie uvedená látka.

Identifikačné čísla	Názov látky	Obsah v % hmotnosti	Klasifikácia podľa nariadenia (ES) č. 1272/2008	Pozn.
	hlavná zložka látky			
EC: 920-750-0 Registračné číslo: 01-2119473851-33-0006	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	100	Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411	1

Poznámky

1 *Látky neznámeho alebo variabilného zloženia, produkty komplexných reakcií alebo biologické materiály - UVCB.*

Plný text všetkých klasifikácii a štandardných viet o nebezpečnosti je uvedený v oddiele 16.

ODDIEL 4: Opatrenia prvej pomoci

4.1. Opis opatrení prvej pomoci

Nevykonávajte umelé dýchanie bez vlastnej ochrany (napr. rúška). Dbajte na vlastnú bezpečnosť. Ak sa prejavia zdravotné ťažkosti alebo v prípade pochybností, upovedomte lekára a poskytnite mu informácie z tejto karty bezpečnostných údajov. Pri bezvedomí umiestnite postihnutú osobu do stabilizovanej polohy naboku s mierne zaklonenou hlavou a dbajte o priechodnosť dýchacích ciest, nikdy nevyvolávajte vracanie. Ak vracia postihnutý sám, dbajte na to, aby nedošlo k vdýchnutiu zvratkov. Pri stavoch ohrozujúcich život najprv vykonávajte resuscitáciu postihnutej osoby a zaistite lekársku pomoc. Zástava dychu - okamžite vykonávajte umelé dýchanie. Zástava srdca - okamžite vykonávajte nepriamu masáž srdca.

Pri vdýchnutí

Dbajte na vlastnú bezpečnosť, nenechajte postihnutého chodiť! Ihneď prerušte expozíciu, dopravte postihnutú osobu na čerstvý vzduch. Pozor na kontaminovaný odev. Podľa situácie volajte záchrannú službu a zaistite lekárske ošetrenie vzhľadom k častej nutnosti ďalšieho sledovania po dobu najmenej 24 hodín.

Pri kontakte s pokožkou

Zoblečte postriekaný odev. Umyte postihnuté miesto veľkým množstvom pokiaľ možno vlažnej vody. Ak nedošlo k poraneniu pokožky, je vhodné použiť aj mydlo, mydlový roztok alebo šampón. Zaistite lekárske ošetrenie, ak pretrváva podráždenie pokožky. Pokožku ihneď opláchnite vodou alebo sprchou.

Po zasiahnutí očí

Ihneď vyplachujte oči prúdom tečúcej vody, roztvorte viečka (aj násilím); ak má postihnutá osoba kontaktné šošovky, ihneď ich vyberte. Vyplachujte najmenej 10 minút.

Po požití

Ak vracia postihnutá osoba, dbajte na to, aby nevdýchla zvratky (pretože pri vdýchnutí týchto kvapalín do dýchacích ciest aj v nepatrnom množstve je nebezpečenstvo poškodenia pľúc). Zaistite lekárske ošetrenie vzhľadom k častej nutnosti ďalšieho sledovania po dobu najmenej 24 hodín. Originálny obal s etiketou, prípadne kartu bezpečnostných údajov danej látky zoberte so sebou.

4.2. Najdôležitejšie príznaky a účinky, akútne aj oneskorené

Pri vdýchnutí

Kašeľ, bolesti hlavy. Môže spôsobiť ospalosť alebo závraty.

Pri kontakte s pokožkou

Neočakávajú sa.

Po zasiahnutí očí

Neočakávajú sa.

Po požití

Podráždenie, nevoľnosť.

4.3. Údaj o akejkoľvek potrebe okamžitej lekárskej starostlivosti a osobitného ošetrenia

Liečba symptomatická.

ODDIEL 5: Protipožiarne opatrenia

5.1. Hasiace prostriedky

Vhodné hasiace prostriedky

Pena odolná alkoholu, oxid uhličitý, prášok, voda - striekajúci prúd, vodná hmla.

Nevhodné hasiace prostriedky

Voda - plný prúd.

5.2. Osobitné druhy nebezpečnosti vyplývajúce z látky alebo zo zmesi

Pri požiari môže dochádzať k vzniku oxidu uhoľnatého a uhličitého a ďalších toxických plynov. Vdychovanie nebezpečných rozkladných (pyrolýznych) produktov môže spôsobiť vážne poškodenie zdravia.

5.3. Pokyny pre požiarnikov

Samostatný dýchací prístroj (SDP) s chemickým ochranným oblekom len v prípade možného osobného (tesného) kontaktu. Použite izolačný dýchací prístroj a celotelový ochranný oblek. Uzavreté nádoby s produktom v blízkosti požiaru chladťe vodou. Kontaminované hasivo nenechajte uniknúť do kanalizácie, povrchových a spodných vôd.

ODDIEL 6: Opatrenia pri náhodnom uvoľnení

6.1. Osobné bezpečnostné opatrenia, ochranné vybavenie a núdzové postupy

Zaistite dostatočné vetranie. Látka je horľavá. Odstráňte všetky zdroje zapálenia. Používajte osobné ochranné pracovné prostriedky. Postupujte podľa pokynov, obsiahnutých v oddieloch 7 a 8. Nevdychujte hmlu/pary/aerosóly.

6.2. Bezpečnostné opatrenia pre životné prostredie

Nepripustite vniknutie do kanalizácie. Zabráňte kontaminácii pôdy a úniku do povrchových alebo spodných vôd.

6.3. Metódy a materiál na zabránenie šíreniu a vyčistenie

Rozliaty produkt pokryte vhodným (nehorľavým) absorbujúcim materiálom (piesok, kremelina, zemina a iné vhodné absorpčné materiály), zhromaždite v dobre uzavretých nádobách a odstráňte podľa oddielu 13. Pri úniku veľkého množstva produktu informujte hasičov a iné kompetentné orgány. Po odstránení produktu umyte kontaminované miesto veľkým množstvom vody. Nepoužívajte rozpúšťadlá.

6.4. Odkaz na iné oddiely

Pozri oddiel 7., 8. a 13.

ODDIEL 7: Zaobchádzanie a skladovanie

7.1. Bezpečnostné opatrenia na bezpečné zaobchádzanie

Zabráňte tvorbe plynov a pár v zápalných alebo výbušných koncentráciách. Produkt používajte iba na miestach, kde neprichádza do styku s otvoreným ohňom a inými zápalnými zdrojmi. Používajte neiskriace nástroje. Odporúča sa používať antistatický odev aj obuv. Nevdychujte hmlu/pary/aerosóly. Nefajčite. Používajte iba na voľnom priestranstve alebo v dobre vetranom priestore. Používajte osobné ochranné pracovné prostriedky podľa oddielu 8. Dbajte na platné právne predpisy o bezpečnosti a ochrane zdravia. Uzemnite a upevnite nádobu a plniace zariadenie. Používajte elektrické/ventilačné/osvetľovacie zariadenie do výbušného prostredia. Vykonajte opatrenia na zabránenie výbojom statickej elektriny. Zabráňte uvoľneniu do životného prostredia.

7.2. Podmienky na bezpečné skladovanie vrátane akejkoľvek nekompatibility

Skladujte v tesne uzavretých obaloch na chladných, suchých a dobre vetraných miestach na to určených. Nevystavujte slnku. Uchovávajte uzamknuté. Nádobu uchovávajte tesne uzavretú. Uchovávajte v chlade.

Obsah	Druh obalu	Materiál obalu
0,5 l	fľaša	PET
1 l	fľaša	PET
3,4 l	kanister	FE
4,5 l	kanister	FE
9 l	kanister	FE
200 l	sud / barel	FE

Skladovacia teplota min 5 °C, max 35 °C

Špecifické požiadavky alebo pravidlá vzťahujúce sa k látke/zmesi

Pary rozpúšťadiel sú ťažšie ako vzduch a hromadia sa najmä u podlahy, kde v zmesi so vzduchom môžu vytvárať výbušnú zmes.

7.3. Špecifické konečné použitie, resp. použitia

neuvedené

ODDIEL 8: Kontroly expozície/osobná ochrana

8.1. Kontrolné parametre

DNEL

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics				
Pracovníci / spotrebitelia	Cesta expozície	Hodnota	Účinok	Zdroj
Pracovníci	Dermálne	773 mg/kg/24h	Chronické účinky miestne	Dodávateľ
Pracovníci	Inhalačne	2035 mg/m³	Chronické účinky miestne	Dodávateľ
Spotrebitelia	Orálne	699 mg/kg/24h	Chronické účinky miestne	Dodávateľ
Spotrebitelia	Dermálne	699 mg/kg/24h	Chronické účinky miestne	Dodávateľ
Spotrebitelia	Inhalačne	608 mg/m³	Chronické účinky miestne	Dodávateľ

8.2. Kontroly expozície

Dbajte na obvyklé opatrenia na ochranu zdravia pri práci a najmä na dobré vetranie. To sa dá dosiahnuť iba miestnym odsávaním alebo účinným celkovým vetraním. Ak sa tak nedá dodržať NPEL, musí sa použiť vhodná ochrana dýchacích ústrojov. Pri práci nejedzte, nepite a nefajčite. Po práci a pred prestávkou na jedlo a oddych si dôkladne umyte ruky vodou a mydlom.

Ochrana očí/tváre

Nie je nutná.

Ochrana kože

Ochrana rúk: Ochranné rukavice odolné výrobku. Znečistenú pokožku dôkladne umyte.

Ochrana dýchacích ciest

Maska s filtrom proti organickým parám v zle vetrateľnom prostredí.

Tepelná nebezpečnosť

Neuvedené.

Kontroly environmentálnej expozície

Dbajte na obvyklé opatrenia na ochranu životného prostredia, pozri bod 6.2. Zozbierajte uniknutý produkt.

Ďalšie údaje

Prílohou karty bezpečnostných údajov je scenár expozície.

ODDIEL 9: Fyzikálne a chemické vlastnosti

9.1. Informácie o základných fyzikálnych a chemických vlastnostiach

Skupenstvo	kvapalné
Farba	bezfarebný
Zápach	charakteristický
Teplota topenia/tuhnutia	<-20 °C
Teplota varu alebo počiatočná teplota varu a rozmedzie teploty varu	70-120 °C
Horľavosť	Veľmi horľavá kvapalina a pary.
Dolná a horná medza výbušnosti	
dolný	1,4 %
horný	7,6 %
Teplota vzplanutia	<0 °C
Teplota samovznietenia	>200 °C
Teplota rozkladu	údaj nie je k dispozícii
Hodnota pH	údaj nie je k dispozícii
Kinematická viskozita	<0,37 mm²/s pri 40 °C
Rozpustnosť vo vode	údaj nie je k dispozícii
Rozpustnosť v tukoch	údaj nie je k dispozícii
Rozdeľovacia konštanta (hodnota log)	údaj nie je k dispozícii
Tlak pár	10 - 20 kPa pri 40 °C
Hustota a/alebo relatívna hustota	
hustota	0,710 - 0,780 g/cm³ pri 15 °C
Relatívna hustota pár	údaj nie je k dispozícii

	Vlastnosti častíc	údaj nie je k dispozícii
	Forma	kvapalina
9.2.	**Iné informácie**	
	Rýchlosť odparovania	údaj nie je k dispozícii
	Oxidačné vlastnosti	Nie je oxidujúca.
	Hustota pár	>3
	Hraničná hodnota VOC	kat. B (a) : 850 g/l

ODDIEL 10: Stabilita a reaktivita

10.1. Reaktivita

Látka je veľmi horľavá.

10.2. Chemická stabilita

Pri normálnych podmienkach je produkt stabilný.

10.3. Možnosť nebezpečných reakcií

Nie sú známe.

10.4. Podmienky, ktorým sa treba vyhnúť

Pri normálnom spôsobe použitia je produkt stabilný, k rozkladu nedochádza. Chráňte pred plameňmi, iskrami, prehriatím a pred mrazom.

10.5. Nekompatibilné materiály

Chráňte pred silnými kyselinami, zásadami a oxidačnými činidlami.

10.6. Nebezpečné produkty rozkladu

Pri normálnom spôsobe použitia nevznikajú. Pri vysokých teplotách a pri požiari vznikajú nebezpečné produkty, ako napr. oxid uhoľnatý a oxid uhličitý.

ODDIEL 11: Toxikologické informácie

11.1. Informácie o triedach nebezpečnosti vymedzených v nariadení (ES) č. 1272/2008

Pre látku nie sú žiadne toxikologické údaje k dispozícii.

Akútna toxicita

neuvedené

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics						
Cesta expozície	Parameter	Hodnota	Doba expozície	Druh	Pohlavie	Zdroj
Orálne	LD_{50}	>5840 mg/kg		Potkan		Dodávateľ
Inhalačne	LD_{50}	>23300 mg/m³		Potkan		Dodávateľ
Dermálne	LD_{50}	>2920 mg/kg		Králik		Dodávateľ

Poleptanie kože / podráždenie kože

Na základe dostupných údajov nie sú kritéria pre klasifikáciu splnené.

Vážne poškodenie očí / podráždenie očí

Na základe dostupných údajov nie sú kritéria pre klasifikáciu splnené.

Respiračná alebo kožná senzibilizácia

Na základe dostupných údajov nie sú kritéria pre klasifikáciu splnené.

Mutagenita zárodočných buniek

Na základe dostupných údajov nie sú kritéria pre klasifikáciu splnené.

Karcinogenita

Na základe dostupných údajov nie sú kritéria pre klasifikáciu splnené.

Reprodukčná toxicita

Na základe dostupných údajov nie sú kritéria pre klasifikáciu splnené.

Toxicita pre špecifický cieľový orgán (STOT) – jednorazová expozícia
Môže spôsobiť ospalosť alebo závraty.

Toxicita pre špecifický cieľový orgán (STOT) – opakovaná expozícia
Na základe dostupných údajov nie sú kritéria pre klasifikáciu splnené.

Aspiračná nebezpečnosť
Môže byť smrteľný po požití a vniknutí do dýchacích ciest.

11.2. Informácie o inej nebezpečnosti

Vlastnosti endokrinných disruptorov (rozvracačov)
Látka nemá vlastnosti vyvolávajúce narušenie endokrinnej činnosti v súlade s kritériami stanovenými v nariadení Komisie v prenesenej právomoci (EÚ) 2017/2100 alebo v nariadení Komisie (EÚ) 2018/605.

Iné informácie
neuvedené

ODDIEL 12: Ekologické informácie

12.1. Toxicita

Toxický pre vodné organizmy, s dlhodobými účinkami.

Akútna toxicita

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics					
Parameter	Hodnota	Doba expozície	Druh	Prostredie	Zdroj
EL_{50}	4,5 mg/l	48 hodín	Dafnie (Daphnia magna)	Sladká voda	Dodávateľ
EL_{50}	10 mg/l	72 hodín	Riasy (Pseudokirchneriella subcapitata)	Sladká voda	Dodávateľ
NOEC	0,17 mg/l	21 dní	Dafnie (Daphnia magna)	Sladká voda	Dodávateľ
LL_{50}	3,0 mg/l	96 hodín	Ryby (Oncorhynchus mykiss)	Sladká voda	Dodávateľ
NOEL	0,574 mg/l	28 dní	Ryby (Oncorhynchus mykiss)	Sladká voda	Dodávateľ

12.2. Perzistencia a degradovateľnosť

neuvedené

Biologická odbúrateľnosť

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics					
Parameter	Hodnota	Doba expozície	Prostredie	Výsledok	Zdroj
	>74 %	28 dní		Biologicky odbúrateľný	Dodávateľ

12.3. Bioakumulačný potenciál

Neuvedené.

12.4. Mobilita v pôde

Neuvedené.

12.5. Výsledky posúdenia PBT a vPvB

Produkt neobsahuje látky, ktoré spĺňajú kritériá pre látky PBT alebo vPvB v súlade s prílohou XIII, nariadenie (ES) č. 1907/2006 (REACH) v platnom znení.

12.6. Vlastnosti endokrinných disruptorov (rozvracačov)

Táto látka nemá vlastnosti narúšajúce endokrinný systém, pokiaľ ide o necieľové, keďže nespĺňa kritériá stanovené v oddiele B nariadenia (EÚ) 2017/2100.

12.7. Iné nepriaznivé účinky

Neuvedené.

ODDIEL 13: Opatrenia pri zneškodňovaní

13.1. Metódy spracovania odpadu

Nebezpečenstvo kontaminácie životného prostredia, postupujte podľa Zákona NR SR č. 79/2015 Z.z. o odpadoch, v znení neskorších predpisov a podľa vykonávacích predpisov o zneškodňovaní odpadov. Postupujte podľa platných predpisov o zneškodňovaní odpadov. Nepoužitý výrobok a znečistený obal uložte do označených nádob na zber odpadu a predajte na odstránenie oprávnenej osobe na odstránenie odpadu (špecializovanej firme), ktorá má oprávnenie na túto činnosť. Nepoužitý výrobok nevylievajte do kanalizácie. Nesmie sa odstraňovať spoločne s komunálnymi odpadmi. Prázdne obaly je možné energeticky využiť v spaľovni odpadov alebo ukladať na skládke príslušného zaradenia. Dokonale vyčistené obaly je možné odovzdať na recykláciu.

Právne predpisy o odpadoch

Zákon č. 430/2021 Z.z., ktorým sa mení a dopĺňa zákon č. 79/2015 Z. z. o odpadoch a o zmene a doplnení niektorých zákonov v znení neskorších predpisov Vyhláška MŽP SR č. 371/2015 Z. z., ktorou sa vykonávajú niektoré ustanovenia zákona o odpadoch v znení neskorších predpisov. Vyhláška MŽP SR č.365/2015 Z.z. ktorou sa ustanovuje Katalóg odpadov.

Kód druhu odpadu

07 01 04* iné organické rozpúšťadlá, premývacie kvapaliny a matečné lúhy

Kód druhu odpadu pre obal

15 01 10* obaly obsahujúce zvyšky nebezpečných látok alebo kontaminované nebezpečnými látkami

(*) - nebezpečný odpad podľa smernice 2008/98/ES o nebezpečných odpadoch

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ODDIEL 14: Informácie o doprave

14.1. Číslo OSN alebo identifikačné číslo

UN 1268

14.2. Správne expedičné označenie OSN

ROPNÉ DESTILÁTY, I. N.

14.3. Trieda, resp. triedy nebezpečnosti pre dopravu

3 Horľavé kvapalné látky

14.4. Obalová skupina

II

14.5. Nebezpečnosť pre životné prostredie

nie je relevantné

14.6. Osobitné bezpečnostné opatrenia pre užívateľa

Odkaz v oddieloch 4 až 8.

14.7. Námorná preprava hromadného nákladu podľa nástrojov IMO

nie je relevantné

Doplňujúce informácie

Identifikačné číslo nebezpečnosti	**33**
UN číslo	**1268**
Klasifikačný kód	F1
Bezpečnostné značky	3+ohrozujúce životné prostredie



Cestná preprava - ADR

Zvláštne ustanovenie	640D, 664
Obmedzené množstvá	1 L
Vybrané množstvá	E1
Obal	
Obalové inštrukcie	P001, IBC02, R001
Ustanovenia na zmiešané balenie	MP19
Prenosné cisterny a kontajnery na prepravu vo voľne loženom stave	
Pokyny	T7
Zvláštne ustanovenie	TP1, TP8, TP28
ADR cisterny	
Kód cisterny	LGBF
Vozidlo na prepravu v cisternách	FL
Dopravná kategória	2
Kód obmedzujúci tunel	(D/E)
Zvláštne ustanovenie pre	
Prevádzka	S2, S20

Železničná preprava - RID

Zvláštne ustanovenie	640D, 664
Obal	
Obalové inštrukcie	P001, IBC02, R001
Ustanovenia na zmiešané balenie	MP19
Prenosné cisterny a kontajnery na prepravu vo voľne loženom stave	
Pokyny	T7
Zvláštne ustanovenie	TP1, TP8, TP28
RID nádrže	
Kód cisterny	LGBF
Dopravná kategória	0

Letecká preprava - ICAO/IATA

Baliace inštrukcie limitované množstvo	Y344
Baliace inštrukcie pasažier	355
Baliace inštrukcie kargo	366

Námorná preprava - IMDG

EmS (pohotovostný plán)	F-E, S-E
MFAG	310

ODDIEL 15: Regulačné informácie

15.1. Nariadenia/právne predpisy špecifické pre látku alebo zmes v oblasti bezpečnosti, zdravia a životného prostredia

Zákon č. 355 / 2007 Z. z. Zákon o ochrane, podpore a rozvoji verejného zdravia a o zmene a doplnení niektorých zákonov. Zákon č.194/2018 Z.z., ktorým sa mení a dopĺňa zákon č. 137/2010 Z. z. o ovzduší v znení neskorších predpisov a ktorým sa menia a dopĺňajú niektoré zákony. Nariadenie Európskeho parlamentu a Rady (ES) č. 1907/2006 z 18. decembra 2006 o registrácii, hodnotení, autorizácii a obmedzovaní chemikálií (REACH) a o zriadení Európskej chemickej agentúry, o zmene a doplnení smernice 1999/45/ES a o zrušení nariadenia Rady (EHS) č. 793/93 a nariadenia Komisie (ES) č. 1488/94, smernice Rady 76/769/EHS a smerníc Komisie 91/155/EHS, 93/67/EHS, 93/105/ES a 2000/21/ES v platnom znení. Nariadenie Európskeho parlamentu a Rady (ES) č. 1907/2006 o registrácii, hodnotení, autorizácii a obmedzovaní chemikálií (REACH) a o zriadení Európskej chemickej agentúry, o zmene a doplnení smernice 1999/45/ES a o zrušení nariadenia Rady (EHS) č. 793/93 a nariadenia Komisie (ES) č. 1488/94, smernice Rady 76/769/EHS a smerníc Komisie 91/155/EHS, 93/67/EHS, 93/105/ES a 2000/21/ES v platnom znení. Nariadenie Európskeho parlamentu a Rady (ES) č. 1272/2008 v platnom znení. Nariadenie Európskeho parlamentu a Rady (ES) č. 1272/2008 o klasifikácii, označovaní a balení látok a zmesí, o zmene, doplnení a zrušení smerníc 67/548/EHS a 1999/45/ES a o zmene a doplnení nariadenia (ES) č. 1907/2006 v platnom znení. Zákon NR SR č. 67/2010 Z.z. o podmienkach uvedenia chemických látok a chemických zmesí na trh a o zmene a doplnení niektorých zákonov (chemický zákon). Vyhláška MŽP SR 98/2021 Z. z., ktorou sa mení a dopĺňa vyhláška Ministerstva životného prostredia Slovenskej republiky č. 410/2012 Z. z., ktorou sa vykonávajú niektoré ustanovenia zákona o ovzduší v znení neskorších predpisov. Zákon NR SR č. 79/2015 Z.z. o odpadoch a o zmene a doplnení niektorých zákonov. Vyhláška MŽP SR 127/2011 Z.z., ktorou sa ustanovuje zoznam regulovaných výrobkov, označovanie ich obalov a požiadavky na obmedzenie emisií prchavých organických zlúčenín pri používaní organických rozpúšťadiel v regulovaných výrobkoch. Zákon č.478/2002 Z.z. o ochrane ovzdušia a ktorým sa dopĺňa zákon č. 401/1998 Z. z. o poplatkoch za znečisťovanie ovzdušia v znení neskorších predpisov (zákon o ovzduší). Nariadenie Komisie (EÚ) 2020/878 z 18. júna 2020, ktorým sa mení príloha II k nariadeniu Európskeho parlamentu a Rady (ES) č. 1907/2006 o registrácii, hodnotení, autorizácii a obmedzovaní chemikálií (REACH).

15.2. Hodnotenie chemickej bezpečnosti

Áno.

ODDIEL 16: Iné informácie

Zoznam výstražných upozornení použitých v karte bezpečnostných údajov

H225	Veľmi horľavá kvapalina a pary.
H304	Môže byť smrteľný po požití a vniknutí do dýchacích ciest.
H336	Môže spôsobiť ospalosť alebo závraty.
H411	Toxický pre vodné organizmy, s dlhodobými účinkami.

Zoznam bezpečnostných upozornení použitých v karte bezpečnostných údajov

P101	Ak je potrebná lekárska pomoc, majte k dispozícii obal alebo etiketu výrobku.
P102	Uchovávajte mimo dosahu detí.
P210	Uchovávajte mimo dosahu tepla, horúcich povrchov, iskier, otvoreného ohňa a iných zdrojov zapálenia. Nefajčite.
P271	Používajte iba na voľnom priestranstve alebo v dobre vetranom priestore.
P301+P310	PO POŽITÍ: Okamžite volajte lekára.
P331	Nevyvolávajte zvracanie.
P403+P235	Uchovávajte na dobre vetranom mieste. Uchovávajte v chlade.
P405	Uchovávajte uzamknuté.
P501	Zneškodnite obsah/nádobu odovzdaním osobe oprávnenej pre nakladanie s odpadmi alebo vrátením dodávateľovi.

Ďalšie informácie dôležité z hľadiska bezpečnosti a ochrany zdravia človeka

Výrobok nesmie byť - bez zvláštneho súhlasu výrobcu/dovozcu - používaný na iný účel ako je uvedené v oddieli 1. Užívateľ je zodpovedný za dodržiavanie všetkých súvisiacich predpisov na ochranu zdravia.

Legenda k skratkám a akronymom použitým v karte bezpečnostných údajov

ADR	Dohoda o medzinárodnej cestnej preprave nebezpečných vecí
Aquatic Chronic	Nebezpečnosť pre vodné prostredie (chronická)
Asp. Tox.	Aspiračná nebezpečnosť
BCF	Biokoncentračný faktor
CAS	Chemical Abstracts Service
CLP	Nariadenie (ES) č. 1272/2008 o klasifikácii, označovaní a balení látok a zmesí
Číslo OSN	Štvormiestne identifikačné číslo látky alebo predmetu prebrané zo Vzorov predpisov OSN

EC	Číslo ES je číselný identifikátor látok na zozname ES
EINECS	Európsky zoznam existujúcich obchodovaných chemických látok
EL_{50}	Účinná úroveň pre 50 % testovaných organizmov
EmS	Pohotovostný plán
EÚ	Európska únia
EuPCS	Európsky systém kategorizácie výrobkov
Flam. Liq.	Horľavá kvapalina
IATA	Medzinárodná asociácia leteckých dopravcov
IBC	Medzinárodný predpis pre stavbu a vybavenie lodí hromadne prepravujúce nebezpečné chemikálie
ICAO	Medzinárodná organizácia pre civilné letectvo
IMDG	Medzinárodná námorná preprava nebezpečného tovaru
IMO	Medzinárodná námorná organizácia
INCI	Medzinárodné názvoslovie kozmetických zložiek
ISO	Medzinárodná organizácia pre normalizáciu
IUPAC	Medzinárodná únia pre čistú a aplikovanú chémiu
LD_{50}	Smrteľná dávka látky, pri ktorej možno očakávať, že spôsobí smrť 50% populácie
LL_{50}	Smrteľná zaťaženie pre 50 % testovaných organizmov
log Kow	Oktanol-voda rozdeľovací koeficient
NDS	Najvyššia prípustná koncentrácia
NDSCh	Najvyššia prípustná koncentrácia - krátkodobá
NOEC	Koncentrácia bez pozorovaného účinku
NOEL	Hladina bez pozorovaného účinku
NPEL	Najvyšší prípustný expozičný limit
OEL	Expozičné limity na pracovisku
PBT	Perzistentná, bioakumulatívna a toxická
PMT	Perzistentná, mobilná a toxická
ppm	Počet častíc na milión (miliontina)
REACH	Registrácia, hodnotenie, autorizácia a obmedzovanie chemických látok
RID	Dohoda o preprave nebezpečného tovaru po železnici
STOT SE	Toxicita pre špecifický cieľový orgán – jednorazová expozícia
UVCB	Látka neznámeho alebo variabilného zloženia, komplexné reakčné produkt alebo biologický materiál
VOC	Prchavé organické zlúčeniny
vPvB	Veľmi perzistentný a veľmi bioakumulatívny
vPvM	Veľmi perzistentná a veľmi mobilná

Pokyny pre školenie

Zoznámiť pracovníkov s odporúčaným spôsobom použitia, povinnými ochrannými prostriedkami, prvou pomocou a zakázanými manipuláciami s produktom.

Odporúčané obmedzenie použitia

neuvedené

Informácie o zdrojoch údajov použitých pri zostavovaní karty bezpečnostných údajov

Nariadenie Európskeho parlamentu a Rady (ES) č. 1907/2006 (REACH) v platnom znení. Nariadenie Európskeho parlamentu a Rady (ES) č. 1272/2008 v platnom znení. Údaje od výrobcu látky / zmesi, ak sú k dispozícii - údaje z registračnej dokumentácie.

Vykonané zmeny (ktoré informácie boli pridané, vypustené alebo upravené)

Verzia 4.0 nahradzuje verziu KBÚ z 12. 1. 2023. Zmeny boli vykonané v oddieloch 2, 12, 13, 15 a 16.

Ďalšie údaje

Postup klasifikácie - metóda výpočtu.

Prehlásenie

Karta bezpečnostných údajov obsahuje údaje na zaistenie bezpečnosti a ochrany zdravia pri práci a ochrany životného prostredia. Uvedené údaje zodpovedajú súčasnému stavu vedomostí a skúseností a sú v súlade s platnými právnymi predpismi. Nemôžu byť považované za záruku vhodnosti a použiteľnosti výrobku pre konkrétnu aplikáciu.

Scenario 1: Manufacture of Substance – Industrial

Section 1 Exposure Scenario Title	
Title	
Manufacture of Substance – Industrial GES 1.1	
Use Descriptor	
Sector(s) of Use	3
Process Categories	1, 2, 3, 4, 8a, 8b, 15
Environmental Release Categories	1, 4
Specific Environmental Release Category	ESVOC 1.1.v1
Processes, tasks, activities covered	
Manufacture of the substance or use as an intermediate or process chemical or extraction agent. Includes recycling/ recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions (*only required controls to demonstrate safe use listed*)**
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
General exposures (open systems) [CS16] PROC4	No specific measures identified[EI18]
Process sampling [CS2] PROC8b	No specific measures identified[EI18]
Laboratory activities	No specific measures identified[EI18]

[CS36] PROC15	
Bulk transfers [CS14](open systems) [CS108] PROC8b	No specific measures identified[EI18]
Bulk transfers [CS14](closed systems) [CS107] PROC8b	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]

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)	4500
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	4500
Maximum daily site tonnage (kg/day)	45000
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	100
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.05
Release fraction to wastewater from process (initial release prior to RMM)	0.00003
Release fraction to soil from process (initial release prior to RMM)	0.0001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater Sediment [TCR1b]. Prevent discharge of undissolved substance to or recover from onsite wastewater [TCR14]. 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 the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	

Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	4300000
Assumed domestic sewage treatment plant flow (m^3/d)	10000
Conditions and measures related to external treatment of waste for disposal	
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 indentified OCs and RMMs is contained in PETRORISK file in IUCLID Section 13 – "LocalCSR" worksheet.	
Section 3 Exposure Estimation	
3.1. Health	
The ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].	

Scenario 2: Distribution of Substance – Industrial

Section 1 Exposure Scenario Title	
Title	
Distribution of Substance – Industrial GES 1A.1	
Use Descriptor	
Sector(s) of Use	3
Process Categories	1, 2, 3, 4, 8a, 8b, 9, 15

Environmental Release Categories	1, 2, 3, 4, 5, 6, 7
Specific Environmental Release Category	ESVOC 1.1b.v1
Processes, tasks, activities covered	
Bulk loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading, maintenance and associated laboratory activities. Excludes emissions during transport.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions (*only required controls to demonstrate safe use listed*)**
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
General exposures (open systems) [CS16] PROC4	No specific measures identified[EI18]
Process sampling [CS2] PROC3	No specific measures identified[EI18]
Laboratory activities [CS36] PROC15	No specific measures identified[EI18]
Bulk transfers [CS14](closed systems) [CS107] PROC8b	No specific measures identified[EI18]
Bulk transfers [CS14](open systems) [CS108] PROC8b	No specific measures identified[EI18]
Drum and small package filling [CS6] PROC9	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]
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)	4220
Fraction of Regional tonnage used locally	0.002
Annual site tonnage (tonnes/year)	8.4e-1
Maximum daily site tonnage (kg/day)	4.2e1
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.001
Release fraction to wastewater from process (initial release prior to RMM)	0.000001
Release fraction to soil from process (initial release prior to RMM)	0.00001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
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 the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	620000
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 local and/of 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 ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22].	

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] 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].

Scenario 3: Formulation & (Re)packing of Substances and Mixtures – Industrial

Section 1 Exposure Scenario Title	
Title	
Formulation & (Re)packing of Substances and Mixtures – Industrial GES 2.1	
Use Descriptor	
Sector(s) of Use	10
Process Categories	1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15
Environmental Release Categories	2
Specific Environmental Release Category	ESVOC 2.2.v1
Processes, tasks, activities covered	
Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletization, extrusion, large and small scale packing, maintenance, sampling 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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	Specific Risk Management Measures and Operating Conditions (only required controls to demonstrate safe use listed)
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures	No specific measures identified[EI18]

(closed systems) [CS15] PROC2	
General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
General exposures (open systems) [CS16] PROC4	No specific measures identified[EI18]
Batch processes at elevated temperatures [CS136]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC3	No specific measures identified[EI18]
Process sampling [CS2] PROC3	No specific measures identified[EI18]
Laboratory activities [CS36] PROC15	No specific measures identified[EI18]
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]
Mixing operations (open systems) [CS30] PROC5	No specific measures identified[EI18]
Manual [CS34]Transfer from/pouring from containers [CS22] PROC8a	No specific measures identified[EI18]
Drum/batch transfers [CS8] PROC8b	No specific measures identified[EI18]
Production or preparation or articles by tabletting, compression, extrusion or pelletisation [CS100] PROC14	No specific measures identified[EI18]
Drum and small package filling [CS6] PROC9	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]
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)	120
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	120
Maximum daily site tonnage (kg/day)	1200
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	100
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (*after typical onsite RMMs, consistent with EU Solvent Emissions Directive requirements*)	0.025
Release fraction to wastewater from process (initial release prior to RMM)	0.00002
Release fraction to soil from process (initial release prior to RMM)	0.0001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven Freshwater Sediment [TCR1b]. Prevent discharge of undissolved substance to or recover from onsite wastewater [TCR14]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	1300000
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 4: Uses in Coatings – Industrial

Section 1 Exposure Scenario Title	
Title	
Uses in Coatings – Industrial GES 3.1	
Use Descriptor	
Sector(s) of Use	3
Process Categories	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 14, 15
Environmental Release Categories	4
Specific Environmental Release Category	ESVOC 4.3a.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, spreader, dip, flow, fluidised bed on production lines 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	Liquid, vapour pressure 0.5 - 10kPa at STP [OC4]

product	
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Concentration of substance in product	Up to 100% (unless stated)
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15]with sample collection [CS56]Use in contained systems [CS38] PROC2	No specific measures identified[EI18]
Film formation - force drying (50 - 100°C). Stoving (>100°C). UV/EB radiation curing [CS94]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC2	No specific measures identified[EI18]
Mixing operations (closed systems) [CS29]General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
Film formation - air drying [CS95] PROC4	No specific measures identified[EI18]
Preparation of material for application [CS96]Mixing operations (open systems) [CS30] PROC5	No specific measures identified[EI18]
Spraying (automatic/robotic)	No specific measures identified[EI18]

[CS97] PROC7	
Manual [CS34]Spraying [CS10] PROC7	No specific measures identified[EI18]
Material transfers [CS3] PROC8a	No specific measures identified[EI18]
Material transfers [CS3] PROC8b	No specific measures identified[EI18]
Roller, spreader, flow application [CS98] PROC10	No specific measures identified[EI18]
Dipping, immersion and pouring [CS4] PROC13	No specific measures identified[EI18]
Laboratory activities [CS36] PROC15	No specific measures identified[EI18]
Material transfers [CS3]Drum/batch transfers [CS8]Transfer from/pouring from containers [CS22] PROC9	No specific measures identified[EI18]
Production or preparation or articles by tabletting, compression, extrusion or pelletisation [CS100] PROC14	No specific measures identified[EI18]

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)	300
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	300
Maximum daily site tonnage (kg/day)	15000
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.98
Release fraction to wastewater from process (initial release prior to	0.00007

RMM)	
Release fraction to soil from process (initial release prior to RMM)	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Prevent discharge of undissolved substance to or recover from onsite wastewater [TCR14]. Risk from environmental exposure is driven by Freshwater Sediment [TCR1b]. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required [TCR10].	
Treat air emission to provide a typical removal efficiency of (%)	90
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	8.4
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	370000
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 local and/of 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 ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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]	

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].

Scenario 5: Uses in Coatings – Professional

Section 1 Exposure Scenario Title	
Title	
Uses in Coatings – Professional GES 3.2	
Use Descriptor	
Sector(s) of Use	22
Process Categories	1, 2, 3, 4, 5, 8a, 8b, 10, 11, 13, 15, 19
Environmental Release Categories	8a, 8d
Specific Environmental Release Category	ESVOC 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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
Filling / preparation of	No specific measures identified[EI18]

equipment from drums or containers. [CS45] PROC2	
General exposures (closed systems) [CS15]Use in contained systems [CS38] PROC2	No specific measures identified[EI18]
Preparation of material for application [CS96] PROC3	No specific measures identified[EI18]
Film formation - air drying [CS95]Outdoor [OC9] PROC4	No specific measures identified[EI18]
Film formation - air drying [CS95]Indoor [OC8] PROC4	No specific measures identified[EI18]
Preparation of material for application [CS96]Indoor [OC8] PROC5	No specific measures identified[EI18]
Preparation of material for application [CS96]Indoor [OC8] PROC5	No specific measures identified[EI18]
Preparation of material for application [CS96]Outdoor [OC9] PROC5	No specific measures identified[EI18]
Material transfers [CS3]Drum/batch transfers [CS8] PROC8a	No specific measures identified[EI18]
Material transfers [CS3]Drum/batch transfers [CS8] PROC8b	No specific measures identified[EI18]
Roller, spreader, flow application [CS98]Indoor [OC8] PROC10	No specific measures identified[EI18]
Roller, spreader, flow application [CS98]Outdoor [OC9] PROC10	No specific measures identified[EI18]
Manual [CS34]Spraying [CS10]Indoor [OC8] PROC11	Carry out in a vented booth [E57]

Manual [CS34]Spraying [CS10]Outdoor [OC9] PROC11	Ensure operation is undertaken outdoors [E69]
Dipping, immersion and pouring [CS4]Indoor [OC8] PROC13	No specific measures identified[EI18]
Dipping, immersion and pouring [CS4]Outdoor [OC9] PROC13	No specific measures identified[EI18]
Laboratory activities [CS36] PROC15	No specific measures identified[EI18]
Hand application - fingerpaints, pastels, adhesives [CS72]Indoor [OC8] PROC19	No specific measures identified[EI18]
Hand application - fingerpaints, pastels, adhesives [CS72]Outdoor [OC9] PROC19	No specific measures identified[EI18]

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)	260
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.13
Maximum daily site tonnage (kg/day)	0.36
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.98
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.01
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions	

and releases to soil	
Risk from environmental exposure is driven by Agricultural Soil [TCR1f]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	2400
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 local and/of 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 ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 6: Uses in Coatings – Consumer

Section 1 Exposure Scenario Title		
Title		
Uses in Coatings – Consumer GES 3.3		
Use Descriptor		
Sector(s) of Use	21	
Product Categories	1, 4, 8, 9, 15, 18, 23, 24, 31, 34	
Environmental Release Categories	8a, 8d	
Specific Environmental Release Category	ESVOC 8.3c.v1	
Processes, tasks, activities covered		
Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.		
Assessment Method		
See Section 3.		
Section 2 Operational conditions and risk management measures		
Section 2.1 Control of consumer exposure		
Product characteristics		
Physical form of product	Liquid, vapour pressure 0.5 - 10kPa at STP [OC4]	
Concentration of substance in product	Unless otherwise stated, cover concentrations up to 100% [ConsOC1]	
Amounts used	Unless otherwise stated, covers use amounts up to13800g [ConsOC2]; covers skin contact area up to 857.5cm2 [ConsOC5]	
Frequency and duration of use/exposure	Unless otherwise stated, covers use frequency up to 1 times per day [ConsOC4]; covers exposure up to 8 hours per event [ConsOC14]	
Other Operational Conditions affecting exposure	Unless otherwise stated assumes use at ambient temperatures [ConsOC15]; assumes use in a 20 m3 room [ConsOC11]; assumes use with typical ventilation [ConsOC8].	
Product Category	**Specific Risk Management Measures and Operating Conditions *(only required controls to demonstrate safe use listed)***	
PC1:Adhesives, sealants--Glues, hobby use	OC	Unless otherwise stated, covers concentrations up to 30% [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 35.73 cm2 [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
PC1:Adhesives, sealants--Glues DIY-use (carpet glue, tile glue, wood parquet glue)	OC	Unless otherwise stated, covers concentrations up to 30% [ConsOC1]; covers use up to 1 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 110.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 6390g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 6.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC1:Adhesives, sealants--Glue from spray	OC	Unless otherwise stated, covers concentrations up to 30% [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 35.73 cm2 [ConsOC5]; for each use event, covers use amounts up to 85.05g [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
PC1:Adhesives, sealants--Sealants	OC	Unless otherwise stated, covers concentrations up to 30% [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 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
PC4_n:Anti-freeze and de-icing products--Washing car window	OC	Unless otherwise stated, covers concentrations up to 1% [ConsOC1]; covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; for each use event, covers use amounts up to 0.5g [ConsOC2]; Covers use in a one car garage (34m3) under typcial ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.02hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs

		stated
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 365 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 typcial 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
PC4_n:Anti-freeze and de-icing products--Lock de-icer	OC	Unless otherwise stated, covers concentrations up to 50% [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 214.40 cm2 [ConsOC5]; for each use event, covers use amounts up to 4g [ConsOC2]; Covers use in a one car garage (34m3) under typcial 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
PC8_n: Biocidal products (excipient use only for solvent products)--Laundry and dish washing products	OC	Unless otherwise stated, covers concentrations up to 5% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC8_n: Biocidal products (excipient use only for solvent products)--Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)	OC	Unless otherwise stated, covers concentrations up to 5% [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];
	RMM	No specific RMMs identified beyond those OCs

		stated
PC8_n: Biocidal products (excipient use only for solvent products)--Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)	OC	Unless otherwise stated, covers concentrations up to 15% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC9a:Coatings and paints, fillers putties, thinners--Waterborne latex wall paint	OC	Unless otherwise stated, covers concentrations up to 1.5% [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 428.75 cm2 [ConsOC5]; for each use event, covers use amounts up to 2760g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 2.20hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC9a:Coatings and paints, fillers putties, thinners--Solvent rich, high solid, water borne paint	OC	Unless otherwise stated, covers concentrations up to 27.5% [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 2.20hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC9a:Coatings and paints, fillers putties, thinners--Aerosol spray can	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 typcial ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.33hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC9a:Coatings and	OC	Unless otherwise stated, covers concentrations up to

paints, fillers putties, thinners--Removers (paint-, glue-, wall paper-, sealant-remover)		50% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC9b:Fillers, putties, plasters, modeling clay--Fillers and putty	OC	Unless otherwise stated, covers concentrations up to 2% [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 4.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC9b:Fillers, putties, plasters, modeling clay--Plasters and floor equalizers	OC	Unless otherwise stated, covers concentrations up to 2% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC9b:Fillers, putties, plasters, modeling clay--Modelling clay	OC	Unless otherwise stated, covers concentrations up to 1% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC9c:Finger paints --Finger paints	OC	Unless otherwise stated, covers concentrations up to 50% [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
PC15_n: Non-metal surface treatment products--Waterborne latex wall paint	OC	Unless otherwise stated, covers concentrations up to 1.5% [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 428.75 cm2 [ConsOC5]; for each use event, covers use amounts up to 2760g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 2.20hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC15_n: Non-metal surface treatment products--Solvent rich, high solid, water borne paint	OC	Unless otherwise stated, covers concentrations up to 27.5% [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 2.20hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC15_n: Non-metal surface treatment products--Aerosol spray can	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 typcial ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.33hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC15_n: Non-metal surface treatment products--Removers (paint-, glue-, wall paper-, sealant-remover)	OC	Unless otherwise stated, covers concentrations up to 50% [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];
	RMM	No specific RMMs identified beyond those OCs stated

PC18_n: Ink and toners--Inks and toners.	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 71.40 cm2 [ConsOC5]; for each use event, covers use amounts up to 40g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 2.20hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC23_n: Leather tanning, dye, finishing, impregnation and care products--Polishes, wax / cream (floor, furniture, shoes)	OC	Unless otherwise stated, covers concentrations up to 50% [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 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 1.23hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC23_n: Leather tanning, dye, finishing, impregnation and care products--Polishes, spray (furniture, shoes)	OC	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];
	RMM	No specific RMMs identified beyond those OCs stated
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 typcial 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
PC24: Lubricants,	OC	Unless otherwise stated, covers concentrations up to

greases, and release products--Pastes		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]
	RMM	No specific RMMs identified beyond those OCs stated
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
PC31:Polishes and wax blends--Polishes, wax / cream (floor, furniture, shoes)	OC	Unless otherwise stated, covers concentrations up to 50% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC31:Polishes and wax blends--Polishes, spray (furniture, shoes)	OC	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
PC34_n: Textile dyes, finishing and impregnating products---	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 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 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

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)	40
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.02
Maximum daily site tonnage (kg/day)	0.055
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.99
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.005
Conditions and measures related to municipal sewage treatment plant	
Risk from environmental exposure is driven by Freshwater [TRC 1a].	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	640
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 local and/of 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 consumer exposures, consistent with the content of ECETOC Report no. 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 DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 7: Use in Cleaning Agents – Industrial

Section 1 Exposure Scenario Title	
Title	
Use in Cleaning Agents – Industrial GES 4.1	
Use Descriptor	
Sector(s) of Use	3
Process Categories	2, 3, 4, 7, 8a, 8b, 10, 13
Environmental Release Categories	4
Specific Environmental Release Category	ESVOC 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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]

	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Bulk transfers [CS14] PROC8a	No specific measures identified[EI18]
Automated process with (semi) closed systems. [CS93]Use in contained systems [CS38] PROC2	No specific measures identified[EI18]
Automated process with (semi) closed systems. [CS93]Drum/batch transfers [CS8] PROC3	No specific measures identified[EI18]
Application of cleaning products in closed systems [CS101] PROC2	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45] PROC8b	No specific measures identified[EI18]
Use in contained batch processes [CS37] PROC4	No specific measures identified[EI18]
Degreasing small objects in cleaning station [CS41] PROC13	No specific measures identified[EI18]
Cleaning with low-pressure washers [CS42] PROC10	No specific measures identified[EI18]
Cleaning with high pressure washers [CS44] PROC7	No specific measures identified[EI18]
Manual [CS34]Surfaces [CS48]Cleaning [CS47] PROC10	No specific measures identified[EI18]

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)	38

Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	38
Maximum daily site tonnage (kg/day)	1900
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	1.0
Release fraction to wastewater from process (initial release prior to RMM)	0.0000003
Release fraction to soil from process (initial release prior to RMM)	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Agricultural Soil [TCR1f]. Prevent discharge of undissolved substance to or recover from onsite wastewater [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 the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	13000000
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 8: Use in Cleaning Agents – Professional

Section 1 Exposure Scenario Title	
Title	
Use in Cleaning Agents – Professional GES 4.2	
Use Descriptor	
Sector(s) of Use	22
Process Categories	2, 3, 4, 8a, 8b, 10, 11, 13
Environmental Release Categories	8a, 8d
Specific Environmental Release Category	ESVOC 8.4b.v1
Processes, tasks, activities covered	
Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]

Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Filling / preparation of equipment from drums or containers. [CS45] PROC8b	No specific measures identified[EI18]
Automated process with (semi) closed systems. [CS93]Use in contained systems [CS38] PROC2	No specific measures identified[EI18]
Automated process with (semi) closed systems. [CS93]Drum/batch transfers [CS8]Use in contained systems [CS38] PROC3	No specific measures identified[EI18]
Semi Automated process. (e.g.: Semi automatic application of floor care and maintenance products) [CS76] PROC4	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45] PROC8a	No specific measures identified[EI18]
Manual [CS34]Surfaces [CS48]Cleaning [CS47]Dipping, immersion and pouring [CS4] PROC13	No specific measures identified[EI18]
Cleaning with low-pressure washers [CS42]Rolling, Brushing [CS51]no spraying [CS60] PROC10	No specific measures identified[EI18]
Cleaning with high pressure washers [CS44]Spraying [CS10]Indoor [OC8]	Provide enhanced mechanical ventilation by mechanical means [E48]

PROC11	
Cleaning with high pressure washers [CS44]Spraying [CS10]Outdoor [OC9] PROC11	Ensure operation is undertaken outdoors [E69]
Manual [CS34]Surfaces [CS48]Cleaning [CS47]Spraying [CS10] PROC10	No specific measures identified[EI18]
Ad hoc manual application via trigger sprays, dipping, etc. [CS27]Rolling, Brushing [CS51] PROC10	No specific measures identified[EI18]
Ad hoc manual application via trigger sprays, dipping, etc. [CS27]Rolling, Brushing [CS51] PROC10	No specific measures identified[EI18]
Application of cleaning products in closed systems [CS101]Outdoor [OC9] PROC4	No specific measures identified[EI18]
Cleaning of medical devices [CS74] PROC4	No specific measures identified[EI18]

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)	31
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.016
Maximum daily site tonnage (kg/day)	0.043
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 exposure	

Release fraction to air from process (initial release prior to RMM)	0.02
Release fraction to wastewater from process (initial release prior to RMM)	0.000001
Release fraction to soil from process (initial release prior to RMM)	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater [TCR1a]. Prevent discharge of undissolved substance to or recover from onsite wastewater [TCR14]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	650
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 local and/of 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 ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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]	

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].

Scenario 9: Use in Cleaning Agents – Consumer

Section 1 Exposure Scenario Title		
Title		
Use in Cleaning Agents – Consumer GES 3.3		
Use Descriptor		
Sector(s) of Use	21	
Product Categories	3, 4, 8 (excipient only), 9, 24, 35, 38	
Environmental Release Categories	8a, 8d	
Specific Environmental Release Category	ESVOC 8.4c.v1	
Processes, tasks, activities covered		
Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, lubricants and air care products.		
Assessment Method		
See Section 3.		
Section 2 Operational conditions and risk management measures		
Section 2.1 Control of consumer exposure		
Product characteristics		
Physical form of product	Liquid, vapour pressure 0.5 - 10kPa at STP [OC4]	
Concentration of substance in product	Unless otherwise stated, cover concentrations up to 100% [ConsOC1]	
Amounts used	Unless otherwise stated, covers use amounts up to13800g [ConsOC2]; covers skin contact area up to 857.5cm2 [ConsOC5]	
Frequency and duration of use/exposure	Unless otherwise stated, covers use frequency up to 1 times per day [ConsOC4]; covers exposure up to 8 hours per event [ConsOC14]	
Other Operational Conditions affecting exposure	Unless otherwise stated assumes use at ambient temperatures [ConsOC15]; assumes use in a 20 m3 room [ConsOC11]; assumes use with typical ventilation [ConsOC8].	
Product Category	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***	
PC3:Air care products--Air care, instant action (aerosol sprays)	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 365 days/year[ConsOC3]; covers use up to 4 times/day

		of use[ConsOC4]; for each use event, covers use amounts up to 0.1g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.25hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC3:Air care products--Air care, instant action (aerosol sprays)-pesticidal- excipient only	OC	Unless otherwise stated, covers concentrations up to 50% [ConsOC1]; covers use up to 365 days/year[ConsOC3]; covers use up to 4 times/day of use[ConsOC4]; for each use event, covers use amounts up to 5g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.25hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC3:Air care products--Air care, continuous action (solid and liquid)	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 35.70 cm2 [ConsOC5]; for each use event, covers use amounts up to 0.48g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; 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
PC3:Air care products--Air care, continuous action (solid and liquid)-pesticidal-excipient only	OC	Unless otherwise stated, covers concentrations up to 50% [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 35.70 cm2 [ConsOC5]; for each use event, covers use amounts up to 0.48g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; 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
PC4_n:Anti-freeze and de-icing products--Washing car window	OC	Unless otherwise stated, covers concentrations up to 1% [ConsOC1]; covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; for each use event, covers use amounts up to 0.5g [ConsOC2]; Covers use in a one car garage (34m3) under typcial ventilation

		[ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.02hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
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 365 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 typcial 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
PC4_n:Anti-freeze and de-icing products--Lock de-icer	OC	Unless otherwise stated, covers concentrations up to 50% [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 214.40 cm2 [ConsOC5]; for each use event, covers use amounts up to 4g [ConsOC2]; Covers use in a one car garage (34m3) under typcial 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
PC8_n: Biocidal products (excipient use only for solvent products)--Laundry and dish washing products	OC	Unless otherwise stated, covers concentrations up to 5% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC8_n: Biocidal products (excipient use only for solvent products)--Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass	OC	Unless otherwise stated, covers concentrations up to 5% [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

cleaners, carpet cleaners, metal cleaners)		each use event, covers exposure up to 0.33hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC8_n: Biocidal products (excipient use only for solvent products)--Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)	OC	Unless otherwise stated, covers concentrations up to 15% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC9a:Coatings and paints, fillers putties, thinners--Waterborne latex wall paint	OC	Unless otherwise stated, covers concentrations up to 1.5% [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 428.75 cm2 [ConsOC5]; for each use event, covers use amounts up to 2760g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 2.20hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC9a:Coatings and paints, fillers putties, thinners--Solvent rich, high solid, water borne paint	OC	Unless otherwise stated, covers concentrations up to 27.5% [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 2.20hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC9a:Coatings and paints, fillers putties, thinners--Aerosol spray can	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 typcial ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers

		exposure up to 0.33hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC9a:Coatings and paints, fillers putties, thinners--Removers (paint-, glue-, wall paper-, sealant-remover)	OC	Unless otherwise stated, covers concentrations up to 50% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC9b:Fillers, putties, plasters, modeling clay--Fillers and putty	OC	Unless otherwise stated, covers concentrations up to 2% [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 4.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC9b:Fillers, putties, plasters, modeling clay--Plasters and floor equalizers	OC	Unless otherwise stated, covers concentrations up to 2% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC9b:Fillers, putties, plasters, modeling clay--Modelling clay	OC	Unless otherwise stated, covers concentrations up to 1% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC9c:Finger paints --Finger paints	OC	Unless otherwise stated, covers concentrations up to 50% [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
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 typcial 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
PC24: Lubricants, greases, and release products--Pastes	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];
	RMM	No specific RMMs identified beyond those OCs stated
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
PC35:Washing and cleaning products (including solvent based products)--Laundry and dish washing products	OC	Unless otherwise stated, covers concentrations up to 5% [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];
	RMM	No specific RMMs identified beyond those OCs

		stated
PC35:Washing and cleaning products (including solvent based products)--Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)	OC	Unless otherwise stated, covers concentrations up to 5% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC35:Washing and cleaning products (including solvent based products)--Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)	OC	Unless otherwise stated, covers concentrations up to 15% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC38_n: Welding and soldering products, flux products--NOTE, n_assessment not in TRA	OC	Unless otherwise stated, covers concentrations up to 20% [ConsOC1]; covers use up to 365 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; for each use event, covers use amounts up to 12g [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

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)	7.6
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.0038
Maximum daily site tonnage (kg/day)	0.01
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.95
Release fraction to wastewater from process (initial release prior to RMM)	0.025
Release fraction to soil from process (initial release prior to RMM)	0.025
Conditions and measures related to municipal sewage treatment plant	
Risk from environmental exposure is driven by Freshwater [STP7a].	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	140
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 local and/of 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 consumer exposures, consistent with the content of ECETOC Report no. 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 DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].	

Scenario 10: Lubricants – Industrial

Section 1 Exposure Scenario Title	
Title	
Lubricants – Industrial GES 6.1	
Use Descriptor	
Sector(s) of Use	3
Process Categories	1, 2, 3, 4, 7, 8a, 8b, 9, 10, 13, 17, 18
Environmental Release Categories	4, 7
Specific Environmental Release Category	ESVOC 4.6a.v1
Processes, tasks, activities covered	
Covers the use of formulated lubricants in closed and open systems including material transfers operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
General exposures (open systems) [CS16] PROC4	No specific measures identified[EI18]
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]

Filling / preparation of equipment from drums or containers. [CS45] PROC8a	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45] PROC8b	No specific measures identified[EI18]
Initial factory fill of equipment [CS75] PROC9	No specific measures identified[EI18]
Operation and lubrication of high energy open equipment [CS17] PROC17	No specific measures identified[EI18]
Operation and lubrication of high energy open equipment [CS17] PROC18	No specific measures identified[EI18]
Manual applications e.g. brushing, rolling [CS13] PROC10	No specific measures identified[EI18]
Treatment by dipping and pouring [CS35] PROC13	No specific measures identified[EI18]
Spraying [CS10] PROC7	No specific measures identified[EI18]
Maintenance (of larger plant items) and machine set up [CS77] PROC8b	No specific measures identified[EI18]
Maintenance (of larger plant items) and machine set up [CS77]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC8b	No specific measures identified[EI18]
Maintenance of small items [CS18] PROC8a	No specific measures identified[EI18]
Remanufacture of reject articles [CS19] PROC9	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]

Material storage [CS67] PROC2	No specific measures identified[EI18]
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)	24
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	24
Maximum daily site tonnage (kg/day)	1200
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.000003
Release fraction to soil from process (initial release prior to RMM)	0.001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater Sediment [TCR1b]. Prevent discharge of undissolved substance to or recover from onsite wastewater [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 the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	8500000
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 11: Lubricants – Professional: Low Environmental Release

Section 1 Exposure Scenario Title	
Title	
Lubricants – Professional: Low Environmental Release GES 6.2a	
Use Descriptor	
Sector(s) of Use	22
Process Categories	1, 2, 3, 4, 8a, 8b, 9, 10, 11, 13, 17, 18, 20
Environmental Release Categories	9a, 9b
Specific Environmental Release Category	ESVOC 9.6b.v1
Processes, tasks, activities covered	
Covers the use of formulated lubricants in closed or contained systems including material transfers operations, operation of engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
Operation of equipment containing enigne oils and similar [CS26] PROC20	No specific measures identified[EI18]
General exposures (open systems) [CS16] PROC4	No specific measures identified[EI18]
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45]Dedicated facility [CS81] PROC8b	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45]Non-dedicated facility [CS82] PROC8a	No specific measures identified[EI18]
Operation and	No specific measures identified[EI18]

lubrication of high energy open equipment [CS17]Indoor [OC8] PROC17	
Operation and lubrication of high energy open equipment [CS17] PROC18	No specific measures identified[EI18]
Operation and lubrication of high energy open equipment [CS17]Outdoor [OC9] PROC17	No specific measures identified[EI18]
Maintenance (of larger plant items) and machine set up [CS77] PROC8b	No specific measures identified[EI18]
Maintenance (of larger plant items) and machine set up [CS77]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC8b	No specific measures identified[EI18]
Maintenance of small items [CS18]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC8a	Drain down system prior to equipment break-in or maintenance [E65]
Engine lubricant service [CS78] PROC9	No specific measures identified[EI18]
Manual applications e.g. brushing, rolling [CS13] PROC10	No specific measures identified[EI18]
Spraying [CS10] PROC11	Provide a good standard of general ventilation (3 to 5 air changes per hour) [E40]
Treatment by dipping and pouring [CS35] PROC13	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage	No specific measures identified[EI18]

[CS67] PROC2	
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)	12
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.0059
Maximum daily site tonnage (kg/day)	0.016
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.01
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater [TCR1a]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	220
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 12: Lubricants – Professional: High Environmental Release

Section 1 Exposure Scenario Title	
Title	
Lubricants – Professional: High Environmental Release GES 6.2b	
Use Descriptor	
Sector(s) of Use	22
Process Categories	1, 2, 3, 4, 8a, 8b, 9, 10, 11, 13, 17, 18, 21
Environmental Release Categories	8a, 8d
Specific Environmental Release Category	ESVOC 8.6c.v1
Processes, tasks, activities covered	
Covers the use of formulated lubricants in open systems including material transfers operations, operation of engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
Operation of equipment containing enigne oils and similar [CS26] PROC20	No specific measures identified[EI18]
General exposures (open systems) [CS16] PROC4	No specific measures identified[EI18]
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45]Dedicated facility [CS81] PROC8b	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45]Non-dedicated facility [CS82] PROC8a	No specific measures identified[EI18]
Operation and lubrication of high energy open equipment [CS17]Indoor [OC8] PROC17	No specific measures identified[EI18]

Operation and lubrication of high energy open equipment [CS17] PROC18	No specific measures identified[EI18]
Operation and lubrication of high energy open equipment [CS17]Outdoor [OC9] PROC17	No specific measures identified[EI18]
Maintenance (of larger plant items) and machine set up [CS77] PROC8b	No specific measures identified[EI18]
Maintenance (of larger plant items) and machine set up [CS77]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC8b	No specific measures identified[EI18]
Maintenance of small items [CS18]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC8a	Drain down system prior to equipment break-in or maintenance [E65]
Engine lubricant service [CS78] PROC9	No specific measures identified[EI18]
Manual applications e.g. brushing, rolling [CS13] PROC10	No specific measures identified[EI18]
Spraying [CS10] PROC11	Provide a good standard of general ventilation (3 to 5 air changes per hour) [E40]
Treatment by dipping and pouring [CS35] PROC13	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]
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)	12
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.0059
Maximum daily site tonnage (kg/day)	0.016
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.40
Release fraction to wastewater from process (initial release prior to RMM)	0.05
Release fraction to soil from process (initial release prior to RMM)	0.05
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater [TCR1a]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	170
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 13: Lubricants – Consumer: Low Environmental Release

Section 1 Exposure Scenario Title	
Title	
Lubricants – Consumer: Low Environmental Release GES 6.3a	
Use Descriptor	
Sector(s) of Use	21
Product Categories	1, 24, 31
Environmental Release Categories	9a, 9b
Specific Environmental Release Category	ESVOC 9.6d.v1
Processes, tasks, activities covered	
Covers the consumer use of formulated lubricants in closed or contained systems including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of consumer exposure	
Product characteristics	
Physical form of product	Liquid, vapour pressure 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Unless otherwise stated, cover concentrations up to 100% [ConsOC1]
Amounts used	Unless otherwise stated, covers use amounts up to13800g

	[ConsOC2]; covers skin contact area up to 857.5cm2 [ConsOC5]	
Frequency and duration of use/exposure	Unless otherwise stated, covers use frequency up to 1 times per day [ConsOC4]; covers exposure up to 8 hours per event [ConsOC14]	
Other Operational Conditions affecting exposure	Unless otherwise stated assumes use at ambient temperatures [ConsOC15]; assumes use in a 20 m3 room [ConsOC11]; assumes use with typical ventilation [ConsOC8].	
Product Category	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***	
PC1:Adhesives, sealants--Glues, hobby use	OC	Unless otherwise stated, covers concentrations up to 30% [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 35.73 cm2 [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
PC1:Adhesives, sealants--Glues DIY-use (carpet glue, tile glue, wood parquet glue)	OC	Unless otherwise stated, covers concentrations up to 30% [ConsOC1]; covers use up to 1 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 110.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 6390g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 6.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC1:Adhesives, sealants--Glue from spray	OC	Unless otherwise stated, covers concentrations up to 30% [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 35.73 cm2 [ConsOC5]; for each use event, covers use amounts up to 85.05g [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
PC1:Adhesives, sealants--Sealants	OC	Unless otherwise stated, covers concentrations up to 30% [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 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
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 typcial 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
PC24: Lubricants, greases, and release products--Pastes	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];
	RMM	No specific RMMs identified beyond those OCs stated
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
PC31:Polishes and wax blends--Polishes, wax / cream (floor, furniture, shoes)	OC	Unless otherwise stated, covers concentrations up to 50% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC31:Polishes and wax blends--Polishes, spray (furniture, shoes)	OC	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

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)	5.0
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.0025
Maximum daily site tonnage (kg/day)	0.0068
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.01
Conditions and measures related to municipal sewage treatment plant	
Risk from environmental exposure is driven by Freshwater [STP7a].	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	100
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 local and/of 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 consumer exposures, consistent with the content of ECETOC Report no. 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 DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 14: Lubricants – Consumer: High Environmental Release

Section 1 Exposure Scenario Title	
Title	
Lubricants – Consumer: high environmental release GES 6.3b	
Use Descriptor	
Sector(s) of Use	21
Product Categories	1, 24, 31
Environmental Release Categories	8a, 8d
Specific Environmental Release Category	ESVOC 8.6e.v1
Processes, tasks, activities covered	
Covers the consumer use of formulated lubricants in open systems including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of consumer exposure	
Product characteristics	
Physical form of	Liquid, vapour pressure 0.5 - 10kPa at STP [OC4]

product		
Concentration of substance in product	Unless otherwise stated, cover concentrations up to 100% [ConsOC1]	
Amounts used	Unless otherwise stated, covers use amounts up to13800g [ConsOC2]; covers skin contact area up to 857.5cm2 [ConsOC5]	
Frequency and duration of use/exposure	Unless otherwise stated, covers use frequency up to 1 times per day [ConsOC4]; covers exposure up to 8 hours per event [ConsOC14]	
Other Operational Conditions affecting exposure	Unless otherwise stated assumes use at ambient temperatures [ConsOC15]; assumes use in a 20 m3 room [ConsOC11]; assumes use with typical ventilation [ConsOC8].	
Product Category	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***	
PC1:Adhesives, sealants--Glues, hobby use	OC	Unless otherwise stated, covers concentrations up to 30% [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 35.73 cm2 [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
PC1:Adhesives, sealants--Glues DIY-use (carpet glue, tile glue, wood parquet glue)	OC	Unless otherwise stated, covers concentrations up to 30% [ConsOC1]; covers use up to 1 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 110.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 6390g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 6.00hr/event[ConsOC14];
	RMM	No specific RMMs identified beyond those OCs stated
PC1:Adhesives, sealants--Glue from spray	OC	Unless otherwise stated, covers concentrations up to 30% [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 35.73 cm2 [ConsOC5]; for each use event, covers use amounts up to 85.05g [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
PC1:Adhesives, sealants--Sealants	OC	Unless otherwise stated, covers concentrations up to 30% [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 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
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 typcial 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
PC24: Lubricants, greases, and release products--Pastes	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];
	RMM	No specific RMMs identified beyond those OCs stated
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
PC31:Polishes and wax blends--Polishes, wax / cream (floor, furniture, shoes)	OC	Unless otherwise stated, covers concentrations up to 50% [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];
	RMM	No specific RMMs identified beyond those OCs stated
PC31:Polishes and wax blends--Polishes, spray (furniture, shoes)	OC	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

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)	5.0
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.0025
Maximum daily site tonnage (kg/day)	0.0068
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.40
Release fraction to wastewater from process (initial release prior to RMM)	0.05
Release fraction to soil from process (initial release prior to RMM)	0.05
Conditions and measures related to municipal sewage treatment plant	
Risk from environmental exposure is driven by Freshwater [STP7a].	

Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	88
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 local and/of 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 consumer exposures, consistent with the content of ECETOC Report no. 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 DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].	

Scenario 15: Use in Metal Working Fluids/Rolling Oils – Industrial

Section 1 Exposure Scenario Title	
Title	
Use in Metal Working Fluids/Rolling Oils – Industrial GES 7.1	
Use Descriptor	
Sector(s) of Use	3
Process Categories	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 17
Environmental Release Categories	4
Specific Environmental Release Category	ESVOC 4.7a.v1
Processes, tasks, activities covered	

Covers the use in formulated MWFs/rolling oils including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
General exposures (open systems) [CS16] PROC4	No specific measures identified[EI18]
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45] PROC8b	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45] PROC5	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45]	No specific measures identified[EI18]

PROC9	
Process sampling [CS2] PROC8b	No specific measures identified[EI18]
Metal machining operations [CS79] PROC17	No specific measures identified[EI18]
Treatment by dipping and pouring [CS35] PROC13	No specific measures identified[EI18]
Spraying [CS10] PROC7	No specific measures identified[EI18]
Manual applications e.g. brushing, rolling [CS13] PROC10	No specific measures identified[EI18]
Automated metal rolling/forming [CS80]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC2	No specific measures identified[EI18]
Semi-automated metal rolling/forming [CS83]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC17	No specific measures identified[EI18]
Semi-automated metal rolling/forming [CS83] PROC4	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39]Dedicated facility [CS81] PROC8b	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39]Non-dedicated facility [CS82] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]
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)	15
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	15
Maximum daily site tonnage (kg/day)	740
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.02
Release fraction to wastewater from process (initial release prior to RMM)	0.000003
Release fraction to soil from process (initial release prior to RMM)	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater Sediment [TCR1b]. Prevent discharge of undissolved substance to or recover from onsite wastewater [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 the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	8500000
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 16: Use in Metal Working Fluids/Rolling Oils – Professional: High Environmental Release

Section 1 Exposure Scenario Title	
Title	
Use in Metal working fluids / rolling oils – Professional: high environmental release GES 7.2	
Use Descriptor	
Sector(s) of Use	22
Process Categories	1, 2, 3, 8a, 8b, 9, 10, 11, 13, 17
Environmental Release Categories	8a, 9a (8a only)
Specific Environmental Release Category	ESVOC SpERC 8.7c.v1
Processes, tasks, activities covered	
Covers the use in formulated MWFs including transfer operations, open and contained cutting/machining activities, automated and manual application of corrosion protections, draining and working on contaminated/ reject articles, and disposal of waste oils.	
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	Liquid, vapour pressure 0.5 - 10kPa at STP [OC4]

product	
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45]Dedicated facility [CS81] PROC8b	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45]Dedicated facility [CS81] PROC9	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45]Non-dedicated facility [CS82] PROC8a	No specific measures identified[EI18]
Process sampling [CS2] PROC8b	No specific measures identified[EI18]
Metal machining operations [CS79] PROC17	No specific measures identified[EI18]
Manual applications e.g. brushing, rolling	No specific measures identified[EI18]

[CS13] PROC10	
Spraying [CS10] PROC11	Provide a good standard of general ventilation (3 to 5 air changes per hour) [E40]
Treatment by dipping and pouring [CS35] PROC13	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39]Non-dedicated facility [CS82] PROC8a	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39]Dedicated facility [CS81] PROC8b	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]

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)	7.4
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.0037
Maximum daily site tonnage (kg/day)	0.01
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.40
Release fraction to wastewater from process (initial release prior to RMM)	0.05
Release fraction to soil from process (initial release prior to RMM)	0.05
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
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 the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	120
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 local and/of 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 ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].	

Scenario 17: Use as Release Agents or Binders – Industrial

Section 1 Exposure Scenario Title	
Title	
Use as Release Agents or Binders – Industrial GES 10.1	
Use Descriptor	
Sector(s) of Use	3
Process Categories	1, 2, 3, 4, 6, 7, 8b, 10, 14
Environmental Release Categories	4
Specific Environmental Release Category	ESVOC 4.10a.v1
Processes, tasks, activities covered	
Covers the use as binders and release agents including material transfers, mixing, application (including spraying and brushing), mould forming and casting, and handling of waste.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Material transfers [CS3] PROC1	No specific measures identified[EI18]
Material transfers [CS3] PROC2	No specific measures identified[EI18]
Material transfers [CS3] PROC3	No specific measures identified[EI18]
Drum/batch transfers [CS8] PROC8b	No specific measures identified[EI18]
Mixing operations (closed systems) [CS29] PROC3	No specific measures identified[EI18]
Mixing operations (open systems) [CS30] PROC4	No specific measures identified[EI18]
Mold forming [CS31] PROC14	No specific measures identified[EI18]

Casting operations [CS32](open systems) [CS108]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7]Aerosol generation due to elevated process temperature [OC25] PROC6	No specific measures identified[EI18]
Spraying [CS10]Machine [CS33] PROC7	No specific measures identified[EI18]
Manual applications e.g. brushing, rolling [CS13] PROC10	No specific measures identified[EI18]
Spraying [CS10]Manual [CS34] PROC7	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]

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)	35
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	35
Maximum daily site tonnage (kg/day)	1700
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	1.0
Release fraction to wastewater from process (initial release prior to RMM)	3.0e-7
Release fraction to soil from process (initial release prior to RMM)	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions	

and releases to soil	
Risk from environmental exposure is driven by Agricultural Soil [TCR1f]. Prevent discharge of undissolved substance to or recover from onsite wastewater [TCR14]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	80
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	19000000
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 local and/of 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 ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 18: Use as Release Agents or Binders – Professional

Section 1 Exposure Scenario Title	
Title	
Use as Release Agents or Binders – Professional GES 10.2	
Use Descriptor	
Sector(s) of Use	22
Process Categories	1, 2, 3, 4, 6, 8b, 10, 11, 14
Environmental Release Categories	8a, 8d
Specific Environmental Release Category	ESVOC 8.10b.v1
Processes, tasks, activities covered	
Covers the use as binders and release agents including material transfers, mixing, application by spraying, brushing, and handling of waste.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Material transfers [CS3](closed systems) [CS107] PROC1	No specific measures identified[EI18]
Material transfers [CS3](closed systems) [CS107] PROC2	No specific measures identified[EI18]
Material transfers [CS3](closed systems) [CS107] PROC3	No specific measures identified[EI18]
Drum/batch transfers [CS8] PROC8b	No specific measures identified[EI18]

Mixing operations (closed systems) [CS29] PROC3	No specific measures identified[EI18]
Mixing operations (open systems) [CS30] PROC4	No specific measures identified[EI18]
Mold forming [CS31] PROC14	No specific measures identified[EI18]
Casting operations [CS32](open systems) [CS108]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC6	Provide enhanced mechanical ventilation by mechanical means [E48]
Spraying [CS10]Machine [CS33] PROC11	Provide enhanced mechanical ventilation by mechanical means [E48]
Manual applications e.g. brushing, rolling [CS13] PROC10	No specific measures identified[EI18]
Spraying [CS10]Manual [CS34] PROC11	Provide enhanced mechanical ventilation by mechanical means [E48]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]

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)	0.6
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.0003
Maximum daily site tonnage (kg/day)	0.00082
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.95
Release fraction to wastewater from process (initial release prior to	0.025

RMM)	
Release fraction to soil from process (initial release prior to RMM)	0.025
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater [TCR1a]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	12
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 local and/of 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 ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 19: Use as a Fuel – Industrial

Section 1 Exposure Scenario Title	
Title	
Use as a Fuel – Industrial GES 12.1	
Use Descriptor	
Sector(s) of Use	3
Process Categories	1, 2, 3, 8a, 8b, 16
Environmental Release Categories	7
Specific Environmental Release Category	ESVOC 7.12a.v1
Processes, tasks, activities covered	
Covers the use as a fuel (or fuel additives and additive components) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]
Drum/batch transfers [CS8] PROC8b	No specific measures identified[EI18]
General exposures (closed systems) [CS15]Use in contained batch	No specific measures identified[EI18]

processes [CS37] PROC1	
General exposures (closed systems) [CS15]Use in contained batch processes [CS37] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15]Use in contained batch processes [CS37] PROC3	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15](closed systems) [CS107] PROC16	No specific measures identified[EI18]
General exposures (closed systems) [CS15](closed systems) [CS107] PROC3	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39] PROC8a	No specific measures identified[EI18]
Vessel and container cleaning [CS103] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]
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)	10
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	10

Maximum daily site tonnage (kg/day)	500
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.05
Release fraction to wastewater from process (initial release prior to RMM)	0.00001
Release fraction to soil from process (initial release prior to RMM)	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater Sediment [TCR1b]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	95
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	2600000
Assumed domestic sewage 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 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 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" worksheet.	
Section 3 Exposure Estimation	
3.1. Health	
The ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 20: Use as a Fuel – Professional

Section 1 Exposure Scenario Title	
Title	
Use as a Fuel – Professional GES 12.2	
Use Descriptor	
Sector(s) of Use	22
Process Categories	1, 2, 3, 8a, 8b, 16
Environmental Release Categories	9a, 9b
Specific Environmental Release Category	ESVOC 9.12b.v1
Processes, tasks, activities covered	
Covers the use as a fuel (or fuel additives and additive components) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has

	been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]
Drum/batch transfers [CS8] PROC8b	No specific measures identified[EI18]
General exposures [CS1] PROC8b	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15](closed systems) [CS107] PROC3	No specific measures identified[EI18]
General exposures (closed systems) [CS15](closed systems) [CS107] PROC16	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39] PROC8a	No specific measures identified[EI18]
Vessel and container cleaning [CS103] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]

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)	10
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.005
Maximum daily site tonnage (kg/day)	0.014
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.001
Release fraction to wastewater from process (initial release prior to RMM)	0.00001
Release fraction to soil from process (initial release prior to RMM)	0.00001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater [TCR1a]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on domestic sewage treatment release (kg/d)	210
Assumed domestic sewage 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 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 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" worksheet.	
Section 3 Exposure Estimation	
3.1. Health	
The ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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 factsheet for ESVOC SpERC 9.12b.v1. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

Scenario 21: Use as a Fuel – Consumer

Section 1 Exposure Scenario Title		
Title		
Use as a Fuel – Consumer GES 12.3		
Use Descriptor		
Sector(s) of Use	21	
Product Categories	13	
Environmental Release Categories	9a, 9b	
Specific Environmental Release Category	ESVOC 9.12c.v1	
Processes, tasks, activities covered		
Covers consumer uses in fuels		
Assessment Method		
See Section 3.		
Section 2 Operational conditions and risk management measures		
Section 2.1 Control of consumer exposure		
Product characteristics		
Physical form of product	Liquid, vapour pressure 0.5 - 10kPa at STP [OC4]	
Concentration of substance in product	Unless otherwise stated, cover concentrations up to 100% [ConsOC1]	
Amounts used	Unless otherwise stated, covers use amounts up to13800g [ConsOC2]; covers skin contact area up to 857.5cm2 [ConsOC5]	
Frequency and duration of use/exposure	Unless otherwise stated, covers use frequency up to 1 times per day [ConsOC4]; covers exposure up to 8 hours per event [ConsOC14]	
Other Operational Conditions affecting exposure	Unless otherwise stated assumes use at ambient temperatures [ConsOC15]; assumes use in a 20 m3 room [ConsOC11]; assumes use with typical ventilation [ConsOC8].	
Product Category	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***	
PC13:Fuels--Liquid - subcategories added: Automotive Refuelling	OC	Unless otherwise stated, covers concentrations up to 100% [ConsOC1]; covers use up to 52 days/year[ConsOC3]; covers use up to 1 time/on

		day of use[ConsOC4]; covers skin contact area up to 210.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 37500g [ConsOC2]; covers outdoor use [ConsOC12]; covers use in room size of 100m3[ConsOC11]; for each use event, covers exposure up to 0.05hr/event[ConsOC14];
	RMM	No specific RMMs developed beyong those OCs stated
PC13:Fuels--Liquid - subcategories added: Scooter Refuelling	OC	Unless otherwise stated, covers concentrations up to 100% [ConsOC1]; covers use up to 52 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 210.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 3750g [ConsOC2]; covers outdoor use [ConsOC12]; covers use in room size of 100m3[ConsOC11]; for each use event, covers exposure up to 0.03hr/event[ConsOC14];
	RMM	No specific RMMs developed beyong those OCs stated
PC13:Fuels--Liquid - subcategories added: Garden Equipment - Use	OC	Unless otherwise stated, covers concentrations up to 100% [ConsOC1]; covers use up to 26 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; for each use event, covers use amounts up to 750g [ConsOC2]; covers outdoor use [ConsOC12]; covers use in room size of 100m3[ConsOC11]; for each use event, covers exposure up to 2.00hr/event[ConsOC14];
	RMM	No specific RMMs developed beyong those OCs stated
PC13:Fuels--Liquid (subcategories added): Garden Equipment - Refueling	OC	Unless otherwise stated, covers concentrations up to 100% [ConsOC1]; covers use up to 26 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 420.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 750g [ConsOC2]; Covers use in a one car garage (34m3) under typcial ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.03hr/event[ConsOC14];
	RMM	No specific RMMs developed beyong those OCs stated
PC13:Fuels--Liquid (subcategories added): Home space heater fuel	OC	Unless otherwise stated, covers concentrations up to 100% [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 210.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 3000g [ConsOC2]; covers use under typical household ventilation [ConsOC8];

		covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.03hr/event[ConsOC14];
	RMM	No specific RMMs developed beyong those OCs stated
PC13:Fuels--Liquid - subcategories added: Lamp oil	OC	Unless otherwise stated, covers concentrations up to 100% [ConsOC1]; covers use up to 52 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 210.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 100g [ConsOC2]; covers use under typical household ventilation [ConsOC8]; covers use in room size of 20m3[ConsOC11]; for each use event, covers exposure up to 0.01hr/event[ConsOC14];
	RMM	No specific RMMs developed beyong those OCs stated

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)	10
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.005
Maximum daily site tonnage (kg/day)	0.014
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.001
Release fraction to wastewater from process (initial release prior to RMM)	0.00001
Release fraction to soil from process (initial release prior to RMM)	0.00001
Conditions and measures related to municipal sewage treatment plant	
Risk from environmental exposure is driven by Freshwater [STP7a].	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	210
Assumed domestic sewage 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 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 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" 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 no. 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 DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 22: Use as Functional Fluids – Industrial

Section 1 Exposure Scenario Title	
Title	
Use as Functional Fluids – Industrial GES 13.1	
Use Descriptor	
Sector(s) of Use	3
Process Categories	1, 2, 4, 8a, 8b, 9
Environmental Release Categories	7
Specific Environmental Release Category	ESVOC 7.13a.v1
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 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid, vapour pressure 0.5 - 10kPa at STP [OC4]
Concentration of	Covers percentage substance in the product up to 100%

substance in product	(unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Bulk transfers [CS14](closed systems) [CS107] PROC1	No specific measures identified[EI18]
Bulk transfers [CS14](closed systems) [CS107] PROC2	No specific measures identified[EI18]
Drum/batch transfers [CS8] PROC8b	No specific measures identified[EI18]
Filling of articles/equipment [CS84](closed systems) [CS107] PROC9	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45] PROC8a	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (open systems) [CS16] PROC4	No specific measures identified[EI18]
Remanufacture of reject articles [CS19] PROC9	No specific measures identified[EI18]
Equipment maintenance [CS5] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]
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)	5.0
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	5.0
Maximum daily site tonnage (kg/day)	250
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.000003
Release fraction to soil from process (initial release prior to RMM)	0.001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater [TCR1a]. Prevent discharge of undissolved substance to or recover from onsite wastewater [TCR14]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	2700000
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 23: Use as Functional Fluids – Professional

Section 1 Exposure Scenario Title	
Title	
Use as Functional Fluids – Professional GES 13.2	
Use Descriptor	
Sector(s) of Use	22
Process Categories	1, 2, 3, 8a, 9, 20
Environmental Release Categories	9a, 9b
Specific Environmental Release Category	ESVOC 9.13b.v1
Processes, tasks, activities covered	
Use as functional fluids e.g. cable oils, transfer oils, insulators, refrigerants, hydraulic fluids in professional equipment including maintenance and related material transfers.	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]

Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Drum/batch transfers [CS8] PROC8a	No specific measures identified[EI18]
Transfer from/pouring from containers [CS22] PROC9	No specific measures identified[EI18]
Filling / preparation of equipment from drums or containers. [CS45] PROC9	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC1	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC2	No specific measures identified[EI18]
General exposures (closed systems) [CS15] PROC3	No specific measures identified[EI18]
General exposures (open systems) [CS16] PROC20	No specific measures identified[EI18]
General exposures (open systems) [CS16]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC20	No specific measures identified[EI18]
Remanufacture of reject articles [CS19] PROC9	No specific measures identified[EI18]
Equipment maintenance [CS5] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage	No specific measures identified[EI18]

[CS67] PROC2	
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)	4.0
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.002
Maximum daily site tonnage (kg/day)	0.0055
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.05
Release fraction to wastewater from process (initial release prior to RMM)	0.025
Release fraction to soil from process (initial release prior to RMM)	0.025
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater [TCR1a]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	77
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 24: Use as Functional Fluids – Consumer

Section 1 Exposure Scenario Title	
Title	
Use as Functional Fluids – Consumer GES 13.3	
Use Descriptor	
Sector(s) of Use	21
Product Categories	16, 17
Environmental Release Categories	9a, 9b
Specific Environmental Release Category	ESVOC 9.13c.v1
Processes, tasks, activities covered	
Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of consumer exposure	
Product characteristics	
Physical form of product	Liquid, vapour pressure 0.5 - 10kPa at STP [OC4]
Concentration of	Unless otherwise stated, cover concentrations up to 100%

substance in product	[ConsOC1]	
Amounts used	Unless otherwise stated, covers use amounts up to13800g [ConsOC2]; covers skin contact area up to 857.5cm2 [ConsOC5]	
Frequency and duration of use/exposure	Unless otherwise stated, covers use frequency up to 1 times per day [ConsOC4]; covers exposure up to 8 hours per event [ConsOC14]	
Other Operational Conditions affecting exposure	Unless otherwise stated assumes use at ambient temperatures [ConsOC15]; assumes use in a 20 m3 room [ConsOC11]; assumes use with typical ventilation [ConsOC8].	
Product Category	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***	
PC16_n: Heat transfer fluids--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 typcial 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
PC17_n: Hydraulic fluids--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 typcial 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

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)	2.0
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.001
Maximum daily site tonnage (kg/day)	0.0027

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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.05
Release fraction to wastewater from process (initial release prior to RMM)	0.025
Release fraction to soil from process (initial release prior to RMM)	0.025
Conditions and measures related to municipal sewage treatment plant	
Risk from environmental exposure is driven by Freshwater [STP7a].	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	40
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 local and/of 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 consumer exposures, consistent with the content of ECETOC Report no. 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 DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 25: Use in Road and Construction Applications – Professional

Section 1 Exposure Scenario Title	
Title	
Use in Road and Construction Applications – Professional GES 15.2	
Use Descriptor	
Sector(s) of Use	22
Process Categories	8a, 8b, 10, 11, 13
Environmental Release Categories	8d, 8f
Specific Environmental Release Category	ESVOC 8.15.v1
Processes, tasks, activities covered	
Application of surface coatings and binders in road and construction activities, including paving uses, manual mastic and in the application of roofing and water-proofing membranes	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Drum/batch transfers [CS8]Non-dedicated facility [CS82] PROC8a	No specific measures identified[EI18]
Drum/batch transfers [CS8]Dedicated facility [CS81] PROC8b	No specific measures identified[EI18]
Drum/batch transfers [CS8]Dedicated facility [CS81]Operation is carried out at elevated temperature (> then 20°C above ambient	Clear transfer lines prior to de-coupling [E39]

temperature) [OC7] PROC8b	
Manual applications e.g. brushing, rolling [CS13] PROC10	No specific measures identified[EI18]
Spraying/fogging by machine application [CS25]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC11	Ensure operation is undertaken outdoors [E69]Wear a respirator conforming to EN140 with Type A filter or better. [PPE22]Ensure operatives are trained to minimise exposures [EI19]Stay upwind/keep distance from source [EI22]
Spraying/fogging by machine application [CS25] PROC11	Ensure operation is undertaken outdoors [E69]
Dipping, immersion and pouring [CS4] PROC13	No specific measures identified[EI18]
Equipment cleaning and maintenance [CS39] PROC8a	No specific measures identified[EI18]

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)	7.5
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.0038
Maximum daily site tonnage (kg/day)	0.01
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.95
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.04
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater [TCR1a]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	150
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 local and/of 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 ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 26: Use in Laboratories – Industrial

Section 1 Exposure Scenario Title		
Title		
Use in Laboratories – Industrial GES 17.1		
Use Descriptor		
Sector(s) of Use	3	
Process Categories	10, 15	
Environmental Release Categories	2, 4	
Specific Environmental Release Category	*Not Applicable*	
Processes, tasks, activities covered		
Use of the substance within laboratory settings, including material transfers and equipment cleaning		
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 0.5 - 10kPa at STP [OC4]	
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]	
Amounts used	No Limit	
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]	
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]	
	Assumes a good basic standard of occupational hygiene has been implemented [G1]	
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***	
Laboratory activities [CS36] PROC15	No specific measures identified[EI18]	
Cleaning [CS47] PROC10	No specific measures identified[EI18]	
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)		0.6
Fraction of Regional tonnage used locally		1
Annual site tonnage (tonnes/year)		0.6

Maximum daily site tonnage (kg/day)	30
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.025
Release fraction to wastewater from process (initial release prior to RMM)	0.02
Release fraction to soil from process (initial release prior to RMM)	0.0001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater Sediment [TCR1b]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	1300
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 27: Use in Laboratories – Professional

Section 1 Exposure Scenario Title	
Title	
Use in Laboratories – Professional GES 17.2	
Use Descriptor	
Sector(s) of Use	22
Process Categories	10, 15
Environmental Release Categories	8a
Specific Environmental Release Category	ESVOC 8.17.v1
Processes, tasks, activities covered	
Use of the substance within laboratory settings, including material transfers and equipment cleaning	
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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]

	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Laboratory activities [CS36] PROC15	No specific measures identified[EI18]
Cleaning [CS47] PROC10	No specific measures identified[EI18]

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)	0.8
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	0.0004
Maximum daily site tonnage (kg/day)	0.0011
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 exposure	
Release fraction to air from process (initial release prior to RMM)	0.5
Release fraction to wastewater from process (initial release prior to RMM)	0.5
Release fraction to soil from process (initial release prior to RMM)	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater [TCR1a]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2

Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	13
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 local and/of 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 ELE TOC 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	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].	

Scenario 28: Rubber Production and Processing – Industrial

Section 1 Exposure Scenario Title	
Title	
Rubber Production and Processing – Industrial GES 19.1	
Use Descriptor	
Sector(s) of Use	3, 10, 11
Process Categories	1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 13, 14, 15, 21
Environmental Release Categories	1, 4, 6d
Specific Environmental Release Category	ESVOC 4.19.v1
Processes, tasks, activities covered	
Manufacture of tyres and general rubber articles, including processing of raw (uncured)	

rubber, handling and mixing of rubber additives, calendaring, vulcanising, cooling and finishing as well as 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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Material transfers [CS3](closed systems) [CS107] PROC1	No specific measures identified[EI18]
Material transfers [CS3](closed systems) [CS107] PROC2	No specific measures identified[EI18]
Material transfers [CS3] PROC8b	No specific measures identified[EI18]
Bulk weighing [CS91] PROC1	No specific measures identified[EI18]
Bulk weighing [CS91] PROC2	No specific measures identified[EI18]
Small scale weighing [CS90] PROC9	No specific measures identified[EI18]
Additive premixing [CS92] PROC3	No specific measures identified[EI18]
Additive premixing [CS92] PROC4	No specific measures identified[EI18]
Additive premixing [CS92] PROC5	No specific measures identified[EI18]
Material transfers [CS3] PROC8b	No specific measures identified[EI18]
Material transfers [CS3] PROC9	No specific measures identified[EI18]
Calendering (including Banburys) [CS64]Operation is	No specific measures identified[EI18]

carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC6	
Pressing uncured rubber blanks [CS73] PROC14	No specific measures identified[EI18]
Tyre build up [CS112] PROC7	No specific measures identified[EI18]
Vulcanisation [CS70]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC6	No specific measures identified[EI18]
Vulcanisation [CS70]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7]Manual [CS34] PROC6	No specific measures identified[EI18]
Cooling cured articles [CS71]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC6	No specific measures identified[EI18]
Production of articles by dipping and pouring [CS113] PROC13	No specific measures identified[EI18]
Finishing operations [CS102] PROC21	No specific measures identified[EI18]
Laboratory activities [CS36] PROC15	No specific measures identified[EI18]
Equipment maintenance [CS5] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]
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)	5.0
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	5.0
Maximum daily site tonnage (kg/day)	250
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.00003
Release fraction to soil from process (initial release prior to RMM)	0.0001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by Freshwater Sediment [TCR1b]. Prevent discharge of undissolved substance to or recover from onsite wastewater [TCR14]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	850000
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].

Scenario 29: Use in Polymer Processing – Industrial

Section 1 Exposure Scenario Title	
Title	
Use in Polymer Processing – Industrial GES 21.1	
Use Descriptor	
Sector(s) of Use	10
Process Categories	1, 2, 3, 4, 5, 6, 8a, 8b, 9, 13, 14, 21
Environmental Release Categories	4
Specific Environmental Release Category	ESVOC 4.21a.v1
Processes, tasks, activities covered	
Processing of formulated polymers including material transfers, additives handling (e.g. pigments, stabilisers, fillers, plasticisers, etc.), moulding, curing and forming activities, material re-works, storage and associated 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 0.5 - 10kPa at STP [OC4]
Concentration of substance in product	Covers percentage substance in the product up to 100% (unless stated differently) [G13]
Amounts used	No Limit
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated) [G2]
Other Operational Conditions affecting worker exposure	Assumes use at not > 20oC above ambient [G15]
	Assumes a good basic standard of occupational hygiene has been implemented [G1]
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions** ***(only required controls to demonstrate safe use listed)***
Bulk transfers [CS14](closed systems) [CS107] PROC1	No specific measures identified[EI18]
Bulk transfers [CS14](closed systems) [CS107] PROC2	No specific measures identified[EI18]
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]
Bulk weighing [CS91] PROC1	No specific measures identified[EI18]
Bulk weighing [CS91] PROC2	No specific measures identified[EI18]
Small scale weighing	No specific measures identified[EI18]

[CS90] PROC9	
Additive premixing [CS92] PROC3	No specific measures identified[EI18]
Additive premixing [CS92] PROC4	No specific measures identified[EI18]
Additive premixing [CS92]Avoid carrying out operation for more than 4 hours [OC12] PROC5	No specific measures identified[EI18]
Bulk transfers [CS14] PROC8b	No specific measures identified[EI18]
Bulk transfers [CS14] PROC9	No specific measures identified[EI18]
Calendering (including Banburys) [CS64]Operation is carried out at elevated temperature (> then 20°C above ambient temperature) [OC7] PROC6	No specific measures identified[EI18]
Production of articles by dipping and pouring [CS113] PROC13	No specific measures identified[EI18]
Extrusion and masterbatching [CS88] PROC14	No specific measures identified[EI18]
Injection moulding of articles [CS89] PROC14	No specific measures identified[EI18]
Finishing operations [CS102] PROC21	No specific measures identified[EI18]
Equipment maintenance [CS5] PROC8a	No specific measures identified[EI18]
Material storage [CS67] PROC1	No specific measures identified[EI18]
Material storage [CS67] PROC2	No specific measures identified[EI18]

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)	32
Fraction of Regional tonnage used locally	1
Annual site tonnage (tonnes/year)	32

Maximum daily site tonnage (kg/day)	1600
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	0.5
Release fraction to wastewater from process (initial release prior to RMM)	0
Release fraction to soil from process (initial release prior to RMM)	0.00001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Prevent discharge of undissolved substance to or recover from onsite wastewater [TCR14]. Risk from environmental exposure is driven by Freshwater [TCR1a]. No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	80
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency ≥ (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ (%)	0
Organisation measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.2
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.2
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	24000000
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 local and/of 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 ELE TOC 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
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. [G22]. 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] 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].