SÄKERHETSDATABLAD
DIESEL, BRÄNNOLJA
Datering: 01.01.2019 **Föregående datering:** 06.09.2017

1. IDENTIFIERINGSUPPGIFTER OM ÄMNET/BLANDNINGENOCH BOLAGET/FÖRETAGET

1.1 Produktens identifieringsuppgifter

Handelsnamn/ämnets namn	DIESEL, BRÄNNOLJA
Identifieringskod	POK 0/-7, POK -5/-15, DIK 0/-7, DIK -5/-15, POT -29/-34, DIT -29/-34, MPÖ 0/-7, MPÖ -5/-15, MPÖ -29/-34, Off-Road Diesel
REACH-registreringsnummer	01-2119484664-27-XXXX (Bränslen, diesel) 01-2119450077-42-XXXX (Förnybara kolväten, fraktion av dieseltyp)

1.2 Relevanta identifierade användningar av ämnet eller blandningen och användningar som det avråds från

Produktanvändning	Distribution av ämne Användning som bränslen Tillverkningen och användningen av sprängämnen Formulering och ompackning Identifierade användningar PROC/SU/ERC koder i avsnitt 16.

1.3 Närmare upplysningar om den som tillhandahåller säkerhetsdatablad

Tillverkare, importör eller annan verksamhetsidkare

	North European Oil Trade Oy
Adress	Urho Kekkosen katu 5C
Postnummer och -kontor	00100 Helsinki
Postbox	PB 55
Postnummer och -kontor	00088 S-RYHMÄ
Telefon	+358 10 402 7001
E-postadress	tuotelaatu@neot.fi
FO-nummer	1801056-5

1.4 Telefonnummer för nödsituationer

Allmänt nödtelefonnummer 112

09-471977 eller 09-4711
Giftinformationscentralen
PB 340 (Haartmaninkatu 4)
00029 HUS

2. FARLIGA EGENSKAPER

2.1 Klassificering av ämnet eller blandningen

1272/2008 (CLP)

Flam. Liq. 3, H226
Acute Tox. 4, H332
Skin Irrit. 2, H315
Carc. 2, H351
STOT RE 2, H373
Asp. Tox. 1, H304

Aquatic Chronic 2, H411

67/548/ETY – 1999/45/EY (DSD/DPD)

Xn, N: R20-38-40-65-51/53

2.2 Märkningar

1272/2008 (CLP)

GHS02-GHS07-GHS08-GHS09

Signalord: **FARA**

Innehåller: Bränslen, diesel; Förnybara kolväten (fraktion av dieseltyp)

Faroangivelser

H226	Brandfarlig vätska och ånga.
H332	Skadligt vid inandning.
H315	Irriterar huden.
H351	Misstänks kunna orsaka cancer.
H373	Kan orsaka organskador genom lång eller upprepad exponering.
H304	Kan vara dödligt vid förtäring om det kommer ner i luftvägarna.
H411	Giftigt för vattenlevande organismer med långtidseffekter.

Skyddsangivelser

P210	Får inte utsättas för värme/gnistor/öppen låga/heta ytor. - Rökning förbjuden.
P261	Undvik att inandas ånga.
P301+P310	VID FÖRTÄRING: Kontakta genast GIFINFORMATIONSCENTRALEN eller läkare om det förekommer illamående.
P331	Framkalla INTE kräkning.
P302+P352	VID HUDKONTAKT: Tvätta med mycket tvål och vatten.
P273	Undvik utsläpp till miljön.

2.3 Andra faror

Avdunstar långsamt. Ångorna kan irritera ögon och luftvägar.

Fara för kontaminering av jordmånen och grundvattnet.

3. SAMMANSÄTTNING OCH UPPGIFTER OM BESTÅNDSDELAR

3.2 Blandningar

Ämnets namn	CAS-nummer	EC-nummer	REACH-registreringsnummer	Koncent-ration	Klassificering
Bränslen, diesel	68334-30-5	269-822-7	01-2119484664-27-XXXX	Min. 60 %	CLP: Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin irrit. 2, H315; Acute Tox 4, H332; Carc. 2, H351; STOT RE2 (blood, liver, thymus), H373; Aquatic Chronic 2, H411 DSD/DPD: Xn, N: R20, R38, Carc. Cat 3, R40, R51/53, R65
Förnybara kolväten (fraktion av dieseltyp)	-	618-882-6	01-2119450077-42-XXXX	Max. 40 %	CLP: Asp. Tox. 1, H304; EUH066 DSD-DPD: Xn; R65-66

3.3 Övriga uppgifter

En blandning av diesel, mineralolja samt tillsatsämnen tillverkad av förnybara råvaror. Innehåller petroleumfraktioner samt direkt destillerade och vetekrackade gasoljefraktioner.

Förnybara kolväten (fraktion av dieseltyp): Identitet utanför EU (CAS-nummer och ämnets namn): Alkaner, C10-C20- grenkedjig och linear, CAS 928771-01-1.

4. ÅTGÄRDER VID FÖRSTA HJÄLPEN

4.1 Beskrivning av åtgärder vid första hjälpen

Inandning
Om produkten har inandats, förflytta personen till frisk luft. Om snabb återhämning inte sker, för patienten till läkare.

Hudkontakt
Ta av nedsmutsade kläder. Stänk bör sköljas omedelbart med rikliga mängder vatten under flera minuter, därefter bör de exponerade ställena tvättas med tvål och vatten. Om hudrodnad, svullnad, smärta och/eller andra hudreaktioner förekommer, kontakta läkare.

Ögonkontakt
Skölj omedelbart ögat med rikliga mängder vatten minst 15 minuter, även under ögonlocken. Om det förekommer irritation, grumlig synförmåga eller andra symptom som inte försvinner, kontakta ögonläkare.

Förtäring
Framkalla inte kräkning om substansen sväljs: ombesörj transport till närmaste sjukhus för vidare behandling. Håll huvudet under höftnivå för att undvika aspiration om kräkning uppstår spontant. Om något av följande fördröjda tecken och symtom visar sig inom de följande 6 timmarna ordnas transport till närmaste sjukhus: feber över 37 °C, andfåddhet, tryck över bröstet, ihållande hosta eller väsande andning. Ge inte patienten någonting att äta.

4.2 De viktigaste symptomen och effekterna, både omedelbara och fördröjda

Skadligvid inandning. Om produkten kommer ner i lungorna kan den orsaka en livsfarlig kemisk lunginflammation. Om produkten harkommit ner i lungorna kan följande symptom förekomma: hostande, kvävningssymptom. gnisslande andning, andningssvårigheter, känsla av tryck över bröstet, andnöd och/eller feber. Luftvägssymptomen kan uppstå omedelbart eller först flera timmar efter exponeringen.

4.3 Angivande av omedelbar medicinsk behandling och särskild behandling som eventuellt krävs

Vårdas enligt symptomen.

5. BRANDBEKÄMPNINGSÅTGÄRDER

5.1 Släckmedel

Lämpligt släckmedel

Skum, vattenspray eller dimma. Pulver, koldioxid, sand eller jord kan användas till mindre bränder.

Olämpligt släckmedel

Kraftig vattenstråle.

5.2 Speciella faror som kan uppstå av ämnet eller blandningen:

BRANDFARLIG VÄTSKA OCH ÅNGA: Explosionsfara när trycket växer, om produkttunnorna eller -tankarna blir heta vid eldsvåda. Skadliga brandgaser kan innehålla: en komplex blandning av sediment- och vätskepartiklar och gaser (rök) som driver i luften, kolmonoxid, svaveloxid, olika organiska och oorganiska föreningar. Koldioxid kan bildas om produkten brinner ofullständigt. Produkten flyter och kan antändas på nytt på vattenytan.

5.3 Råd till brandpersonal

Produktbehållare och -tankar i närheten av öppen eld kylsned med vattenstrålar från tillräckligt långt säkerhetsavstånd. Förhindra släckningsvattnetfrån att rinna ut i yt- och grundvattnet.

6. ÅTGÄRDER VID OAVSIKTLIGA UTSLÄPP

6.1 Säkerhetsåtgärder, personskydd och förfarande i nödsituation

Personer som befinner sig påutsläppsområdet evakueras ovanför vinden. Sörj för tillräcklig ventilation, särskilt i slutna utrymmen. Ångorna är tyngre än luften och sprider sig längs jordytan. Hindra tillträdet för obehöriga till faro-området. Undvik hudkontakt samt inandning av oljedimma. Använd tillräcklig skyddsutrustning vid alla åtgärder.
Släck alla antändningskällor. Förhindra elektrostatisk laddning från att bildas med hjälp av säkerhetsåtgärder. Kontrollera att elanordningarna är jordade.

6.2 Miljöskyddsåtgärder

Stoppa läckaget om du kan göra det utan att riskera din hälsa. Försök hindra produkten och släckningsvattnet från att spridas till omgivningen. Flytande produkt samlas upp innan den rinner ner i marken, avloppet eller vattendrag. Meddela omedelbart de lokala myndigheterna om utsläppet.

6.3 Metoder och verktyg för skyddskonstruktioner och rengöring

Uppsamling av den flytande produkten och den kontaminerade jorden påbörjas omedelbart. Vätskan samlas upp genom pumpning eller genom uppsugning av mindre spill med ett inert absorberingsmedel (t.ex. sand, kiseljord, kommersiell impregneringsmedel) och samla upp medlet i tätt slutbara kärl för förstöring. Observera brand- och hälsoriskerna om produkten orsakar. Om möjligt, bör stora läckage i öppet vatten begränsas med flytande bommar eller annan mekanisk utrustning. En expert bör ge råd om användningen av dispergerande medel och vid behov bör de lokala myndigheterna godkänna användningen av dem.

6.4 Hänvisningar till andra avsnitt

Anvisningar om hantering i avsnitt 7.
Anvisningar om skyddsutrustning i avsnitt 8.
Anvisningar om avfallshantering i avsnitt13.

7. HANTERING OCH LAGRING

7.1 Försiktighetsmått för säker hantering

Hanteras och lagras åtskilt från alla värme- och antändningskällor. Risk för gnistbildning orsakad av statisk elektricitet förhindras med hjälp av jordningar. Halterna i luften bör hållas under de explosionsfarliga halterna.

Bör användas endast i slutna system eller sörjas för tillräcklig ventilation (inkapsling eller punktutsugning vid behov). Undvik inandning av ångor och att produkten kommer i kontakt med huden, ögonen eller kläderna. Tvätta händerna efter hanteringen. Ätande, drickande och rökning är förbjudet när produkten hanteras. Använd personlig skyddsutrustning vid behov.
Följ specialanvisningarna vid tankarbeten (risk för undanträngning av syre, eter, kolväten).

7.2 Förhållanden för säker lagring, inklusive eventuell oförenlighet

Lagras i en behållare eller ett lager som lämpar sig för brännbara vätskor. Små produktpartier lagras i väl tillslutna kärl som inte släpper igenom kolväte. Rekommenderade material eller ytbeläggningar för behållare: mjukt stål, rostfritt stål. Lagra inte i omärkta behållare eller kärl. Lagras åtskilt från alla värme- och antändningskällor samt livsmedel.
Använd lämpliga skyddskonstruktioner, t.ex. uppsamlingsbassänger, ytbeläggning av påfyllnings- och tömningsplatsensamt avloppssystem bör finnas, för att hindra läckage från att sprida sig till omgivningen.

7.3 Specifik slutanvändning

Ingen känd.

8. BEGRÄNSNING AV EXPONERINGEN OCH PERSONLIGT SKYDD

8.1 Kotrollparametrar

HTP-värden

Oljedimma* 5 mg/m^3 (8 h) – HTP 2014/FIN

Övriga gränsvärden

För enstaka kolväten kan deras egna rikt- och gränsvärden tillämpas
* Uppföljningsmetod för exponering: SFS-EN 689, NIOSH Method 5026.

DNEL-värden

Anställda:
Bränslen, diesel, Inandning, akut: 4300 mg/m^3 /15 min, oljedimma (Kortvarig exponering, Systematiska effekter)
Bränslen, diesel, Inandning, kronisk: 68 mg/m^3 /8 h, oljedimma, och hud, kronisk: 2.9 mg/kg bw /8 h (Långvarig exponering, Systematiska effekter)

Förnybara kolväten (fraktion av dieseltyp), Inandning, kronisk: 147 mg/m^3 /dag, och hud, kronisk: 42 mg/kg bw /dag (Långvarig exponering, Systematiska effekter)

Konsumenter:
Bränslen, diesel, , Inandning, akut: 2600 mg/m^3 /15 min, oljedimma (Kortvarig exponering, Systematiska effekter)
Bränslen, diesel, Inandning, kronisk: 20 mg/m^3 /24 h, oljedimma, och hud, kronisk: 1.3 mg/kg bw /24 h (Långvarig exponering, Systematiska effekter)

Förnybara kolväten (fraktion av dieseltyp), Inandning, kronisk: 94 mg/m^3 och hud, kronisk: 18 mg/kg bw /dag (Långvarig exponering, Systematiska effekter)

PNEC-värden

Ej definierat.

8.2 Begränsning av exponeringen

Tekniska skyddsåtgärder
Produkten bör hanteras i slutna system. Sörj för tillräcklig ventilation. Använd personlig skyddsutrustning och/eller inkapsling eller punktutsugning vid behov.

Personliga skyddsåtgärder

Ögon- och ansiktsskydd
Om det finns risk för stänk eller det bildas aerosol, använd täta skyddsglasögon. Använd ansiktsskydd vid behov.

Hudskydd
Använd lämplig antistatisk skyddsklädsel. Om det finns risk för stänk, använd kemikaliebeständigahandskar, -skor och skyddsförkläde.

Handskydd
Använd lämpliga kemikaliebeständiga skyddshandskar. Rekommenderade material är t.ex. nitrilgummi, neopren, PVA och Viton. Genomträngningstid är > 480 min., skyddsklass 6 (EN374). Byt ut skyddshandskarna regelbundet.

Andningsskydd
Använd andningsskydd eller halvmask. Andningsskydd: ett kombinerat filter för organiska gaser och ångor samt för fasta och flytande partiklar, filtertyp A2-P3.

Filterskydd kan användas max 2 timmar åt gången. När det under rådande omständighet inte är lämpligt att använda filterskydd (t.ex. höga halter, syrefattiga omständigheter, slutet utrymme), bör man använda andningsapparater med tryckluft eller friskluft. Filtret bör bytas tillräckligt ofta. Andningsskydd enligt EN 140 och EN 141 med.

Begränsning av miljöexponering
Produkten får inte släppas ut omgivningen eller avloppssystemet. Man bör vara förberedd för eventuella läckor med t.ex. uppsamlingsbassänger, ytbeläggning av påfyllnings- och tömningsplatsen samt avloppssystem.

9. FYSIKALISKA OCH KEMISKA EGENSKAPER

9.1 Information om grundläggande fysikaliska och kemiska egenskaper

Utseende	Rödaktig vätska
Lukt	Mild lukt av kolväte
Lukttröskel	Ej känd
pH	Icke definierbar
Smält- eller fryspunkt	Icke definierbar
Kokpunkt och kokområde	150 – 370°C
Flampunkt	≥ 55 °C (EN ISO 2719)
Avdunstningshastighet	Ej känd
Antändlighet (fasta ämnen, gaser)	Ej känd
Övre och nedre antändlighets- eller explosionsgräns	1 - 6,0 volym-%

Ångtryck	< 1 kPa (38 °C, omdöme)
Ångtäthet	Ej känd
Relativ densitet	0,8 - 0,85 mg/m^3 (vatten = 1)
Löslighet (lösligheter)	Knapplöslig i vatten
Fördelningskoefficient: n-oktanol/vatten	log P_{ow} 3 - över 6
Självantändningstemperatur	cirka 240 °C (omdöme)
Sönderfallstemperatur	Ej känd
Viskositet	≥ 4,5 mm^2/s (40 °C)
Sprängbarhet	Har inte klassificerats som explosiv
Oxidation	Har inte klassificerats som oxiderande

9.2 Annan information

Ej angiven.

10. STABILITET OCH REAKTIVITET

10.1 Reaktivitet

Ej reaktiv vid normala användnings- och lagringsförhållanden.

10.2 Kemisk stabilitet

Stabil under normala användningsförhållanden.

10.3 Möjlighet till farliga reaktioner

Ej känd.

10.4 Förhållanden som ska undvikas

Bör hållas åtskild från värmekällor, eld, gnistor och andra antändningskällor.

10.5 Oförenliga material

Oxiderande ämnen

10.6 Farliga nedbrytningsprodukter

Farliga sönderdelningsprodukter förväntas inte bildas vid normala lagringsförhållanden.

11. TOXIKOLOGISK INFORMATION

11.1 Information om de toxikologiska effekterna

Akut toxicitet

Skadlig vid inandning.

Bränslen, diesel:
LD50/ genom munnen, råtta > 5000 mg/kg (OECD 401, 420)
LC50/ genom luftvägar, råtta = 3.6 - 5.4 mg/L (OECD 403)
LD50/ genom huden, kanin = 4300 mg/kg (OECD 434)

Förnybara kolväten (fraktion av dieseltyp):
LD50/ genom munnen, råtta > 2000 mg/kg (EC B1 tris)
LD50/genom huden, råtta > 2000 mg/kg (EC B3)

Irritation och frätning
Irriterar huden. Långvarig eller upprepad kontakt kan orsaka att huden blir torr och irriterad. Ånga och dimma kan irritera ögon och luftvägar.

Farokategorier
Bränslen, diesel: Irriterar huden. Irriterat inte ögon. (OECD 404, 405).
Förnybara kolväten (fraktion av dieseltyp): Irriterar inte huden. Irriterat inte ögon. (EC B4, B5).

Sensibilisering
Produkten är inte klassificerad som sensibiliserande.

Effekter som är cancerframkallande , skadar ärftligheten eller fortplantningsförmågan
Bränslen, diesel:
Produkten misstänks orsaka cancer. Långvarig kontakt har konstaterats orsaka hudtumörer i djurförsök (mus). Produkten innehåller vetekrackade gasoljefraktioner vilka klassificeras som karcinogena.
In vitro-tester påvisade mutagena effekter som inte iakttogs i in vivo-test. (OECD 471, 475)
Anses inte vara farlig för reproduktionsförmågan (OECD 414).

Förnybara kolväten (fraktion av dieseltyp):
In vitro-tester påvisade inte mutagena effekter. (EC B10, B13/14, B17).
Ingen giftig påverkan av fortplantningsförmågan (OECD 416).

Specifik organtoxicitet - enstaka exponering
Produkten har inte klassificerats utgående från specifik organtoxicitet i enstaka exponering.

Specifik organtoxicitet - upprepad exponering
Bränslen, diesel:
Produkten har klassificerats enligt specifik organtoxicitet i upprepad exponering. Kan orsaka organskador i långvarig eller upprepad exponering. Objektorgan: blod, thymuskörtel och lever.

Förnybara kolväten (fraktion av dieseltyp):
Ingen känd effekt (OECD 408)

Risk för aspiration
Produkten kan vara dödlig om den sväljs och kommer ner i luftvägarna. Produkten i lungorna (aspiration) kan orsaka dödlig kemisk lunginflammation.

Övriga uppgifter
Produkten irriterar matsmältningskanalen om den har svalts.

12. EKOLOGISK INFORMATION

12.1 Toxicitet

Produkten är giftig för vattenlevande organismer och kan orsaka skadliga långtidseffekter i vattenmiljön.

Omedelbar toxicitet för vattenorganismer

Bränslen, diesel:
fisk: LL50/96 h = 21 mg/L, NOEL/96 h = 10 mg/L; WAF (OECD 203, EC C.1)
skaldjur: EL50/48 h = 68 mg/L; NOEL/48 h = 47 mg/L; WAF (OECD 202, EC C.2)
alger: EbL/72 h = 10 mg/L; NOEL/48 h = 3 mg/L; NOEL/72 h = 1 mg/L; WAF (OECD 201, EC C.3

Förnybara kolväten (fraktion av dieseltyp):
fisk: LL50/96 h > 1000 mg/L; WAF (OECD 203)

skaldjur: EL50/48 h > 100 mg/L; WAF (OECD 202)
alger: EL50/72 h > 100 mg/L; WAF (OECD 201)

Långvarig toxicitet för vattenorganismer

Bränslen, diesel:
fisk: NOEL/14 d = 0.08 mg/L (QSAR)
skaldjur: NOEL/21 d = 0.2 mg/L (QSAR)

Förnybara kolväten (fraktion av dieseltyp):
skaldjur: NOEC/21 d = 1 mg/L; LOEC/21 d = 3.2 mg/L; WAF (OECD 211)
sedimentorganismer: NOEC/10 d = 373 mg/kg; LOEC/10 d =1165 mg/kg; LC50/10 d = 1200 mg/kg (OSPAR Protocols, Part A: Sediment Bioassay, 2005)

Toxicitet för andra organismer

Mikroorganismer (avloppsslam):
Bränslen, diesel: EL50/40 h > 1000 mg/L; NOEL/40 h = 3.22 mg/L (QSAR)
Förnybara kolväten (fraktion av dieseltyp): EC50/30 min > 1000 mg/L; EC50/3 h > 1000 mg/L (OECD 209).

12.2 Persistens och nedbrytbarhet

Biologisk nedbrytbarhet
Snabbt nedbrytbar.

Kemisk nedbrytbarhet
Hydrolyserar inte i vattnet. Gasoljekolväten kan brytas ned i ytvattnet även ljuskemiskt. Avdunstande kolväten är luftkemiskt nedbrytbara.

12.3 Bioackumuleringsförmåga

Innehåller beståndsdelar som möjligtvis är bioackumulerande (log K_{ow} > 3).

12.4 Rörlighet i jord

Avdunstar delvis från vatten- och jordytan, men en betydande del är kvar efter ett dygn. Stora mängder kan absorberas i marken och kontaminera grundvattnet. I anaeroba förhållanden är nedbrytningen väldigt långsam.

12.5 Resultat av PBT- och vPvB-bedömningen

Produkten innehåller inga beståndsdelar som anses vara bestående, ackumulerande eller giftiga (PBT).
Produkten innehåller inga beståndsdelar som anses vara mycket bestående och mycket ackumulerande (vPvB).

12.6 Andra skadliga effekter

Produkten skall färgas, och direktkontakt av orsakerna, till exempel fåglar och skadliga effekter på växter. Adsorberade kolväterestema kan vara skadligt för sedimentorganismer.

13. AVFALLSHANTERING

13.1 Hanteringsmetoder för avfall

Klassificeras som farligt avfall. Kassera avfallslagstiftningen och lokala myndigheters instruktioner. Vid hantering av avfallet beakta dess faror och ta hand om nödvändiga säkerhetsåtgärder, märkning och information.

13.2 Avfall från överskott / oanvända produkter

Tomma behållare kan innehålla brännbara produktrester. Tomma behållare skall lämnas till lokal återvinning eller avfallshantering.

14. TRANSPORTUPPGIFTER

14.1 UN-nummer

1202

14.2 Officiell transportbenämning

ELDNINGSOLJA, LÄTT

14.3 Riskklass vid transport

3

14.4 Förpackningsgrupp

III

14.5 Miljöfaror

Marine Pollutant

14.6 Speciella säkerhetsåtgärder för användaren

Ej kända.

14.7 Bulktransport enligt till MARPOL 73/78 och IBC-koden

Bulk (MARPOL 73/78, Annex I): Energy-rich fuels

This cargo is considered an Energy-rich fuel and effective 1 January 2019 should be carried subject to Annex I of MARPOL, see Annex 12 of MEPC.2/Circ.24.
Please also refer to MEPC.1/Circ.879 -GUIDELINES FOR THE CARRIAGE OF ENERGY-RICH FUELS AND THEIR BLENDS.

15. GÄLLANDE FÖRESKRIFTER

15.1 Föreskrifter/lagstiftning om ämnet eller blandningen när det gäller säkerhet, hälsa och miljö

Detta säkerhetsdatablad uppfyller kraven i förordningen (EY) N:o 1907/2006 och förordining (EY) N:o 1907/2006 (REACH) förändringar (EU) N:o 453/2010.

15.2 Kemikaliesäkerhetsbedömning

Kemikaliesäkerhetsbedömning har utförts för följande ämnen:
Bränslen, diesel
Förnybara kolväten (fraktion av dieseltyp)

16. ANNAN INFORMATION

16.1 Ändringar till den föregående versionen

Avsnitt 14. Transportuppgifter.

16.2 Förkortningar

CLP: Europaparlamentets och rådets förordning (EG) nr 1272/2008 om klassificering, märkning och förpackning av ämnen och blandningar, ändring och upphävande av direktiven 67/548/EEG och 1999/45/EG samt ändring av förordning (EG) nr 1907/2006.
DSD: Rådets direktiv 67/548/EEG om tillnärmning av lagar och andra författningar om klassificering, förpackning och märkning av farliga ämnen.
DPD: Europaparlamentets och rådets direktiv 1999/45/EG om tillnärmning av medlemsstaternas lagar och andra författningar om klassificering, förpackning och märkning av farliga preparat.
HTP: Halt med känd skadlig inverkan
DNEL: Derived No-Effect Level: Härledd minimal effektnivå
EL50: Effective concentration: Den koncentration av en substans som dödar 50% av en population under
en given tid.
IL50: Inhibitory concentration: Den koncentration av en substans som minskar biologisk eller biologisk funktion med 50 %.
LD50: Lethal dose: Den dos som förorsakar att 50% av populationen dör.
LL50: Lethal level: Den nivå som förorsakar att 50% av populationen dör.

16.3 Källor

Finskspråkiga säkerhetsdatablad för produkten (7 januari 2015).

16.5 Förteckning över relevanta R-fraser, faroangivelser, skyddsfraser och skyddsangivelser

R20	Farligt vid inandning.
R38	Irriterar huden.
R40	Misstänks orsaka cancer.
R51/53	Giftigt för vattenlevande organismer, kan orsaka skadliga långtidseffekter i vattenmiljön.
R65	Farligt: kan ge lungskador vid förtäring.

H226	Brandfarlig vätska och ånga.
H332	Skadlig vid inandning.
H315	Irriterar huden.
H351	Misstänks orsaka cancer.
H373	Kan orsaka organskador genom lång eller upprepad exponering.
H304	Kan vara dödligt vid förtäring om det kommer ner i luftvägarna.
H411	Giftigt för vattenlevande organismer med långtidseffekter.

16.7 Begränsningar i användningen

Identifierade användningar:

Distribution av ämne (SU3; PROC: 4, 8a, 8b, 9, 15; ERC: 1, 2, 3, 4, 5, 6a, 6b, 6c, 6d, 7)

Användning som bränslen
Industriell användning (SU 3; PROC: 1, 2, 3, 8a, 8b, 16; ERC: 7)
Professionell användning (SU 22; PROC: 1, 2, 3, 8a, 8b, 16; ERC: 9a, 9b)
Konsumenter (SU 21; PC 13; ERC: 9a, 9b)

Tillverkningen och användningen av sprängämnen - professionell (SU22; PROC: 1, 3, 5, 8a, 8b; ERC: 8e)

Formulering och ompackning (SU3, SU10; PROC: 1, 2, 3, 4 , 5, 8a, 8b, 9, 14, 15; ERC: 2)

Eldningsolja får inte intas oralt med hjälp av slang.

16.8 Mer information

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ANNEX EXTENDED MATERIAL SAFETY DATA SHEET

Exposure scenarios 1-6

AS1: Distribution of Substance - Industrial

1. Title

Use of descriptor	Sector(s) of Use: Industrial (SU3).
	Process Categories: PROC 4, PROC 8a, PROC 8b, PROC 9, PROC 15
	Environmental Release Categories (ERC): 1, 2, 3, 4, 5, 6a, 6b, 6c, 7 Specific Environmental Release Category: ESVOC SpERC 1.1b.v1
Processes, Tasks and 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.

2. Operational conditions and risk management measures

2.1. Control of worker exposure

Product characteristics
Physical form of product: Liquid With potential for aerosol generation **Vapour pressure (kPa):** Liquid, vapour pressure <0.5 kPa at STP [OC3].
Concentration of substance in product
Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Frequency and duration of use
Covers daily exposures up to 8 hours (unless stated differently) [G2].
Other operational conditions affecting worker exposure
Assumes use at not more than 20 °C above ambient temperature, unless stated differently [G15]. Assumes a good basic standard of occupational hygiene is implemented [G1].
Specific Risk Management Measures and Operational Conditions
General measures applicable to all activities [CS135]
Control any potential exposure using measures such as contained systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of exposure potential and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; provide regular health surveillance as appropriate; identify and implement corrective actions [G25].
General measures (skin irritants) [G19]
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin

contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop [E3].
General exposures (closed systems) [CS15]
Handle substance within a closed system [E47].
General exposures (open systems) [CS16]
Wear suitable gloves tested to EN374 [PPE15].
Process sampling [CS2]
No other specific measures identified [EI20].
Laboratory activities [CS36]
No other specific measures identified [EI20].
Bulk closed loading and unloading [CS501]
Handle substance within a closed system [E47]. Wear suitable gloves tested to EN374 [PPE15].
Bulk open loading and unloading [CS503]
Wear suitable gloves tested to EN374 [PPE15].
Drum and small pack filling [CS6]
Wear suitable gloves tested to EN374 [PPE15].
Equipment cleaning and maintenance [CS39]
Drain down system prior to equipment break-in or maintenance [E65]. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].
Storage [CS67]
Handle substance within a closed system [E84].

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 tonnage: 2.8 e^7 tonnes per year
Fraction of Regional tonnage used locally: 0.002
Annual site tonnage: 5.6 e^4 tonnes per year
Maximum daily site tonnage: 0.19 kilotonnes per day
Frequency and duration of use
Continuous release [FD2].
Emission days per year: 300
Environmental factors not influenced by risk management
Local freshwater dilution fraction: 10
Local marine dilution fraction: 100
Other Operational Conditions of use 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 condition and measures at process level (source) to prevent release
TCS 1: Common practices vary across sites thus conservative process release estimates used.
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil
TCR1j: Risk from environmental exposure is driven by human via indirect exposure (primarily ingestion). TCR14: Prevent discharge of undissolved substance to or recover from onsite wastewater. TCR6: No wastewater treatment required. 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 %.
Organizational measures to prevent / limit release from site
Prevent discharge of undissolved substance to or recover from wastewater [OMS1]. Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or reclaimed [OMS3].
Conditions and measures related to municipal sewage treatment plant
Estimated substance removal from wastewater via domestic sewage treatment 94.1 %.
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs 94.1 %.
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 2.9 kilotonnes per day.
Assumed domestic sewage treatment plant flow 2000 m^3/day.
Conditions and measures related to external treatment of waste for disposal
ETW3: External treatment and disposal of waste should comply with applicable regulations.
Conditions and measures related to external recovery of waste
ERW1: External recovery and recycling of waste should comply with applicable regulations.

3. Exposure estimation

3.1 Health

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

3.2 Environment

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

4. Guidence 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].
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels [G23].
Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Available hazard data do not support the need for a DNEL to be established for other health effects [G36]. Risk Management Measures are based on qualitative risk characterisation [G37].

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].

AS2: Formulation & (Re)packing of Substances - Industrial

1. Title

Use of descriptor	Sector(s) of Use: Industrial (SU3), Formulation of preparations and/or re-packaging (SU10).
	Process Categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15
	Environmental Release Categories (ERC): 2 Specific Environmental Release Category: ESVOC SpERC 2.2.v1
Processes, Tasks and 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.

2. Operational conditions and risk management measures

2.1. Control of worker exposure

Product characteristics
Physical form of product: Liquid With potential for aerosol generation **Vapour pressure (kPa):** Liquid, vapour pressure <0.5 kPa at STP [OC3].
Concentration of substance in product
Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Frequency and duration of use
Covers daily exposures up to 8 hours (unless stated differently) [G2].
Other operational conditions affecting worker exposure
Assumes use at not more than 20 °C above ambient temperature, unless stated differently [G15]. Assumes a good basic standard of occupational hygiene is implemented [G1].
Specific Risk Management Measures and Operational Conditions
General measures applicable to all activities [CS135]
Control any potential exposure using measures such as contained systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of exposure potential and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; provide regular health surveillance as appropriate; identify and implement corrective actions [G25].
General measures (skin irritants) [G19]
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop [E3].

General exposures (closed systems) [CS15]
Handle substance within a closed system [E47].
General exposures (open systems) [CS16]
Wear suitable gloves tested to EN374 [PPE15].
Batch processes at elevated temperatures [CS136]
Provide extract ventilation to points where emissions occur [E54].
Process sampling [CS2]
No other specific measures identified [EI20].
Bulk transfers [CS14]
Handle substance within a closed system [E47]. Wear suitable gloves tested to EN374 [PPE15].
Drum/batch transfers [CS8]
Use drum pumps or carefully pour from container [E64] Wear chemically resistant gloves (tested to EN374) in combination with basic employee training [PPE16]
Mixing operations (open systems) [CS30]
Provide extract ventilation to points where emissions occur [E54] Wear chemically resistant gloves (tested to EN374) in combination with basic employee training [PPE16]
Production or preparation or articles by tabletting, compression, extrusion or pelletisation [CS100]
Wear suitable gloves tested to EN374 [PPE15].
Drum and small package filling [CS8]
Wear suitable gloves tested to EN374 [PPE15]
Laboratory activities [CS36]
No other specific measures identified [EI20]
Equipment cleaning and maintenance [CS39]
Drain down system prior to equipment break-in or maintenance [E65]. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].
Storage [CS67]
Handle substance within a closed system [E84].

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 tonnage: 2.8 e^{7} tonnes per year
Fraction of Regional tonnage used locally: 0.0011
Annual site tonnage: 3.0 e^{4} tonnes per year
Maximum daily site tonnage: 100 tonnes per day
Frequency and duration of use
Continuous release [FD2].
Emission days per year: 300
Environmental factors not influenced by risk management
Local freshwater dilution fraction: 10

Local marine dilution fraction: 100
Other Operational Conditions of use 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): 0.00002 Release fraction to soil from process (initial release prior to RMM): 0.0001
Technical condition and measures at process level (source) to prevent release
TCS 1: Common practices vary across sites thus conservative process release estimates used.
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil
TCR1b: Risk from environmental exposure is driven by freshwater sediment. TCR14: Prevent discharge of undissolved substance to or recover from onsite wastewater. TCR9 If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. 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 ≥ 59.9 %. If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ 0 %.
Organizational measures to prevent / limit release from site
Prevent discharge of undissolved substance to or recover from wastewater [OMS1]. Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or reclaimed [OMS3].
Conditions and measures related to municipal sewage treatment plant
Estimated substance removal from wastewater via domestic sewage treatment 94.1 %.
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs 94.1 %.
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 680 tonnes per day.
Assumed domestic sewage treatment plant flow 2000 m^3 /day.
Conditions and measures related to external treatment of waste for disposal
ETW3: External treatment and disposal of waste should comply with applicable regulations.
Conditions and measures related to external recovery of waste
ERW1: External recovery and recycling of waste should comply with applicable regulations.

3. Exposure estimation

3.1 Health

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

3.2 Environment

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

4. Guidence 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].

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

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Available hazard data do not support the need for a DNEL to be established for other health effects [G36]. Risk Management Measures are based on qualitative risk characterisation [G37].

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].

AS3: Use as a Fuel - Industrial

1. Title

Use of descriptor	Sector(s) of Use: Industrial (SU3).
	Process Categories PROC: PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16
	Environmental Release Categories (ERC): 7 Specific Environmental Release Category: ESVOC SpERC 7.12a.v1
Processes, Tasks and 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.

2. Operational conditions and risk management measures

2.1. Control of worker exposure

Product characteristics
Physical form of product: Liquid With potential for aerosol generation [CS138] **Vapour pressure (kPa):** Liquid, vapour pressure <0.5 kPa at STP [OC3].
Concentration of substance in product
Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Frequency and duration of use
Covers daily exposures up to 8 hours (unless stated differently) [G2].
Other operational conditions affecting worker exposure
Assumes use at not more than 20 °C above ambient temperature, unless stated differently [G15]. Assumes a good basic standard of occupational hygiene is implemented [G1].
Specific Risk Management Measures and Operational Conditions
General measures applicable to all activities [CS135]
Control any potential exposure using measures such as contained systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of exposure potential and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; provide regular health surveillance as appropriate; identify and implement corrective actions [G25].
General measures (skin irritants) [G19]
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop [E3].
Use as a fuel (closed systems) [GEST_12l, CS107]
No other specific measures identified [EI20].

Bulk transfers [CS14]
Wear suitable gloves tested to EN374 [PPE15].
Drum/batch transfers [CS8]
Wear suitable gloves tested to EN374 [PPE15].
Equipment cleaning and maintenance [CS39]
Drain down system prior to equipment break-in or maintenance [E65]. Wear chemically resistant gloves (tested to EN374) in
Storage [CS67]
Handle substance within a closed system [E84].

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 tonnage: 4500 kilotonnes per year
Fraction of Regional tonnage used locally: 0.34
Annual site tonnage: 1500 kilotonnes per year
Maximum daily site tonnage: 5 kilotonnes per day
Frequency and duration of use
Continuous release [FD2].
Emission days per year: 300
Environmental factors not influenced by risk management
Local freshwater dilution fraction: 10
Local marine dilution fraction: 100
Other Operational Conditions of use affecting environmental exposure
Release fraction to air from process (initial release prior to RMM): 0.005 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 condition and measures at process level (source) to prevent release
TCS 1: Common practices vary across sites thus conservative process release estimates used.
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil
TCR1b: Risk from environmental exposure is driven by freshwater sediment TCR9: If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. 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 ≥ 97.7 %. If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ 60.4 %.
Organizational measures to prevent / limit release from site
Prevent discharge of undissolved substance to or recover from wastewater [OMS1]. Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or reclaimed [OMS3].
Conditions and measures related to municipal sewage treatment plant

Estimated substance removal from wastewater via domestic sewage treatment 94.1 %.
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs 97.7 %.
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 5000 tonnes per day.
Assumed domestic sewage treatment plant flow 2000 m^3/day.
Conditions and measures related to external treatment of waste for disposal
ETW1: Combustion emissions limited by required exhaust emission controls. ETW2: Combustion emissions considered in regional exposure assessment.
Conditions and measures related to external recovery of waste
ERW1: External recovery and recycling of waste should comply with applicable regulations.

3. Exposure estimation

3.1 Health

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

3.2 Environment

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

4. Guidence 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].

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

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Available hazard data do not support the need for a DNEL to be established for other health effects [G36]. Risk Management Measures are based on qualitative risk characterisation [G37].

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].

AS4: Use as a Fuel - Professional

1. Title

Use of descriptor	Sector(s) of Use: Professional (SU22).
	Process Categories: PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16
	Environmental Release Categories (ERC): 9a, 9b Specific Environmental Release Category: ESVOC SpERC 9.12b.v1
Processes, Tasks and 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.

2. Operational conditions and risk management measures

2.1. Control of worker exposure

Product characteristics
Physical form of product: Liquid. With potential for aerosol generation [CS138] **Vapour pressure (kPa):** Liquid, vapour pressure <0.5 kPa at STP [OC3].
Concentration of substance in product
Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Frequency and duration of use
Covers daily exposures up to 8 hours (unless stated differently) [G2].
Other operational conditions affecting worker exposure
Assumes use at not more than 20 °C above ambient temperature, unless stated differently [G15]. Assumes a good basic standard of occupational hygiene is implemented [G1].
Specific Risk Management Measures and Operational Conditions
General measures applicable to all activities [CS135]
Control any potential exposure using measures such as contained systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of exposure potential and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; provide regular health surveillance as appropriate; identify and implement corrective actions [G25].
General measures (skin irritants) [G19]
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop [E3].
Use as a fuel (closed systems) [GEST_12l, CS107]
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) [E11] **or** Ensure operation is undertaken outdoors [E69].

Bulk transfers [CS14]
Wear suitable gloves tested to EN374 [PPE15].
Drum/batch transfers [CS8]
Use drum pumps or carefully pour from container [E64]. Wear suitable gloves tested to EN374 [PPE15].
Refuelling activities [CS507]
Wear suitable gloves tested to EN374 [PPE15].
Equipment cleaning and maintenance [CS39]
Drain down system prior to equipment break-in or maintenance [E65]. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].
Storage [CS67]
Handle substance within a closed system [E84].

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 tonnage: 6.7 e^7 per year
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage: 3.3 kilotonnes per year
Maximum daily site tonnage: 9.2 tonnes per day
Frequency and duration of use
Continuous release [FD2].
Emission days per year: 365
Environmental factors not influenced by risk management
Local freshwater dilution fraction: 10
Local marine dilution fraction: 100
Other Operational Conditions of use affecting environmental exposure
Release fraction to air from process (initial release prior to RMM): 0.0001 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 condition and measures at process level (source) to prevent release
TCS 1: Common practices vary across sites thus conservative process release estimates used.
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil
TCR1j: Risk from environmental exposure is driven by human via indirect exposure (primarily ingestion). TCR6: No wastewater treatment required. 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 %.
Organizational measures to prevent / limit release from site

Prevent discharge of undissolved substance to or recover from wastewater [OMS1]. Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or reclaimed [OMS3].
Conditions and measures related to municipal sewage treatment plant
Estimated substance removal from wastewater via domestic sewage treatment 94.1 %.
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs 94.1 %.
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 140 tonnes per day.
Assumed domestic sewage treatment plant flow 2000 m^3 /day.
Conditions and measures related to external treatment of waste for disposal
ETW1: Combustion emissions limited by required exhaust emission controls. ETW2: Combustion emissions considered in regional exposure assessment.
Conditions and measures related to external recovery of waste
ERW1: External recovery and recycling of waste should comply with applicable regulations.

3. Exposure estimation

3.1 Health

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

3.2 Environment

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

4. Guidence 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].

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

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Available hazard data do not support the need for a DNEL to be established for other health effects [G36]. Risk Management Measures are based on qualitative risk characterisation [G37].

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].

AS5: Use as a Fuel – Consumer

1. Title

Use of descriptor	Sector(s) of Use: Professional (SU21).
	Process Categories: PROC13
	Environmental Release Categories (ERC): 9a, 9b Specific Environmental Release Category: ESVOC SpERC 9.12b.v1
Processes, Tasks and Activities Covered	Covers consumer uses in fuels.

2. Operational conditions and risk management measures

2.1. Control of worker exposure

Product characteristics
Physical form of product: Liquid **Vapour pressure (kPa):** Liquid, vapour pressure > 10 kPa [OC15].
Concentration of substance in product
Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Frequency and duration of use
Unless otherwise stated, covers use amounts up to 37500 g [ConsOC2]; covers skin contact area up to 420 cm^2 [ConsOC5]
Other operational conditions affecting worker exposure
Unless otherwise stated, covers use frequency up to 0.143 times per day [ConsOC4]; covers exposure up to 2 hours per event [ConsOC14]
Specific Risk Management Measures and Operational Conditions
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 cm^2 [ConsOC5]; for each use event, covers use amounts up to 37500 g [ConsOC2]; covers outdoor use [ConsOC12]; covers use in room size of 100 m^3 [ConsOC11]; for each use event, covers exposure up to 0.05 hr/event [ConsOC14];
RMM: No specific RMMs developed beyond those OCs stated [ConsRMM15]
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 750 g [ConsOC2]; covers outdoor use [ConsOC12]; covers use in room size of 100 m^3 [ConsOC11]; for each use event, covers exposure up to 2.00 hr/event [ConsOC14];
RMM: No specific RMMs developed beyond those OCs stated [ConsRMM15]
PC13: Fuels- Liquid – subcategories added: Garden Equipment - Refuelling
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 cm^2 [ConsOC5]; for each use event, covers use amounts up to 750 g [ConsOC2]; Coversuse in a one car garage (34 m^3) under typical ventilation [ConsOC10]; covers use in room size of 34 m^3 [ConsOC11]; for each use event, covers exposure up to 0.03 hr/event [ConsOC14];
RMM: No specific RMMs developed beyond those OCs stated [ConsRMM15]

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 tonnage: 1.6 e^7 per year
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage: 8.2 kilotonnes per year
Maximum daily site tonnage: 23 tonnes per day
Frequency and duration of use
Continuous release [FD2].
Emission days per year: 365
Environmental factors not influenced by risk management
Local freshwater dilution fraction: 10
Local marine dilution fraction: 100
Other Operational Conditions of use affecting environmental exposure
Release fraction to air from process (initial release prior to RMM): 0.0001 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
Estimated substance removal from wastewater via domestic sewage treatment 94.1 %.
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 350 tonnes per day.
Assumed domestic sewage treatment plant flow 2000 m^3 /day.
Conditions and measures related to external treatment of waste for disposal
ETW1: Combustion emissions limited by required exhaust emission controls. ETW2: Combustion emissions considered in regional exposure assessment.
Conditions and measures related to external recovery of waste
ERW1: External recovery and recycling of waste should comply with applicable regulations.

3. Exposure estimation

3.1 Health

The ECETOC TRA tool has been used to estimate consumer exposures, consistent with the content of

ECETOC Report #107 and the Chapter R15 of the IR&CSA TGD. Where exposure determinants differ to these sources, then they are indicated.

3.2 Environment

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

4. Guidence 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].

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

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

AS6: Use of substance in Explosives Manufacture and Use - Professional

1. Title

Use of descriptor	Sector(s) of Use: Professional (SU22)
	Process Categories: PROC1, PROC3, PROC5, PROC8a, PROC8b
	Environmental Release Categories (ERC): 8e Specific Environmental Release Category: Not Applicable
Processes, Tasks and Activities Covered	Covers exposures arising from the manufacture and use of slurry explosives (including materials transfer, mixing and charging) and equipment cleaning

2. Operational conditions and risk management measures

2.1. Control of worker exposure

Product characteristics
Physical form of product: Liquid With potential for aerosol generation **Vapour pressure (kPa):** Liquid, vapour pressure <0.5 kPa at STP [OC3].
Concentration of substance in product
Covers percentage substance in the product up to 100 % (unless stated differently) [G13].
Frequency and duration of use
Covers daily exposures up to 8 hours (unless stated differently) [G2].
Other operational conditions affecting worker exposure
Assumes use at not more than 20 °C above ambient temperature, unless stated differently [G15]. Assumes a good basic standard of occupational hygiene is implemented [G1].
Specific Risk Management Measures and Operational Conditions
General measures applicable to all activities [CS135]
Control any potential exposure using measures such as contained systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of exposure potential and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; provide regular health surveillance as appropriate; identify and implement corrective actions [G25].
General measures (skin irritants) [G19]
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop [E3].
General exposures (closed systems) [CS15]
Handle substance within a closed system [E47].
General exposures (open systems) [CS16]

Wear suitable gloves tested to EN374 [PPE15].
Process sampling [CS2]
No other specific measures identified [EI20].
Bulk transfers [CS14]
Handle substance within a closed system [E47]. Wear suitable gloves tested to EN374 [PPE15].
Drum/batch transfers [CS8]
Use drum pumps or carefully pour from container [E64] Wear chemically resistant gloves (tested to EN374) in combination with basic employee training [PPE16]
Mixing operations (open systems) [CS30]
Provide extract ventilation to points where emissions occur [E54] Wear chemically resistant gloves (tested to EN374) in combination with basic employee training [PPE16]
Production or preparation or articles by tabletting, compression, extrusion or pelletisation [CS100]
Wear suitable gloves tested to EN374 [PPE15].
Drum and small package filling [CS8]
Wear suitable gloves tested to EN374 [PPE15]
Laboratory activities [CS36]
No specific measures identified [EI18]
Equipment cleaning and maintenance [CS39]
Drain down system prior to equipment break-in or maintenance [E65]. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training [PPE16].
Storage [CS67]
Handle substance within a closed system [E84].

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 tonnage: 1.3 e^4 tonnes per year
Fraction of Regional tonnage used locally: 0.0005
Annual site tonnage: 6.7 tonnes per year
Maximum daily site tonnage: 18 kg per day
Frequency and duration of use
Continuous release [FD2].
Emission days per year: 365
Environmental factors not influenced by risk management
Local freshwater dilution fraction: 10
Local marine dilution fraction: 100
Other Operational Conditions of use 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): 0.02 Release fraction to soil from process (initial release prior to RMM): 0.01

Technical condition and measures at process level (source) to prevent release
TCS 1: Common practices vary across sites thus conservative process release estimates used.
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil
TCR1b: Risk from environmental exposure is driven by freshwater sediment. TCR9 If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. 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 ≥ 8.8 %. If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of ≥ 0 %.
Organizational measures to prevent / limit release from site
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or reclaimed [OMS3].
Conditions and measures related to municipal sewage treatment plant
Estimated substance removal from wastewater via domestic sewage treatment 94.1 %.
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs 94.1 %.
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 0.29 tonnes per day.
Assumed domestic sewage treatment plant flow 2000 m^3 /day.
Conditions and measures related to external treatment of waste for disposal
ETW3: External treatment and disposal of waste should comply with applicable regulations.
Conditions and measures related to external recovery of waste
ERW1: External recovery and recycling of waste should comply with applicable regulations.

3. Exposure estimation

3.1 Health

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

3.2 Environment

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

4. Guidence 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].

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

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Available hazard data do not support the need for a DNEL to be established for other health effects [G36]. Risk Management Measures are based on qualitative risk characterisation [G37].

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.