SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name	:	Diesel B7 ADD
Unique Formula Identifier (UFI)	:	5XJ3-GE4P-H100-RPSX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture

Intended usage	:	Operation of Diesel engines, particularly vehicle Diesel engines. For further information our Competence Center Fuels is available to you at the telephone no. +43-1-40440-43486.
Identified uses according to CSR (Chemical Safety Report)	:	Formulation or re-packing 02 - Formulation & (re)packing of substances and mixtures (classified) Use at industrial sites 12a - Use as a fuel - Industrial (classified) Widespread use by professional workers 12b - Use as a fuel: Professional (classified) Consumer use 12c - Use as a fuel - Consumer (classified)

For details related to the Uses please see Annex.

1.3 Details of the supplier of the safety data sheet

Full address **Manufacturer, importer, supplier**	:	OMV Downstream GmbH Trabrennstrasse 6-8 1020 Wien Austria

Telephone	:	+43 (0) 810 240 282
E-mail address of the competent person	:	info.msds@omv.com

1.4 Emergency telephone number

+43 (0) 664 91 08 787	Green-line refinery Schwechat 24h/7d
+43 (0) 1 406 43 43	Poison Control Centre - Hours of operation: 24h/7d

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (EC Regulation No 1272/2008)

Flam. Liq. 3 H226, Acute Tox. 4 H332, Skin Irrit. 2 H315, Asp. Tox. 1 H304, Carc. 2 H351, STOT RE 2 H373, Aquatic Chronic 2 H411,
For the full text of classifications referred to in this section and H-phrases and classification methods, see Section 16.

2.2 Label elements

Labelling (EC Regulation No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H373 May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements :
Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.
Disposal:
P501 Dispose of contents/container according to the disposal routes specified by law.

2.3 Other hazards

Remarks : Particular danger of slipping caused by the escaped or spilled product.
Further dangers to man and environment caused by the product are not known.
The product does not meet the PBT / vPvB criteria.
The currently available information does not indicate that component substances have endocrine disrupting properties as defined by the criteria set out in Section B of Regulation (EU) No 2017/2100.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

not applicable

3.2 Mixtures

Chemical nature	hydrocarbons Can also contain small amounts of proprietary performance-enhancing additives.
	Automotive diesel fuel containing up to 7.0 % (V/V) Fatty Acid Methyl Esters.

Hazardous ingredients

Chemical Name	Index-No. CAS-No. EINECS-No./ELINCS No. Registration number	Classification (EC Regulation No 1272/2008)	Concentration [%W/W]	Note
Fuels, diesel	649-224-00-6 68334-30-5 269-822-7 01-2119484664-27	Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Asp. Tox. 1; H304 Carc. 2; H351 STOT RE 2; H373 Aquatic Chronic 2; H411	<= 94,50	N
methanol	603-001-00-X 67-56-1 200-659-6 01-2119433307-44	Flam. Liq. 2; H225 Acute Tox. 3; H331 Acute Tox. 3; H311 Acute Tox. 3; H301 STOT SE 1; H370	<= 0,014	IOELV, SCL

These values do not represent any product specification / max. possible mass percentages for classification
For the full text of classifications referred to in this section and H-phrases and classification methods, see Section 16.
IOELV substance with a Union workplace exposure limit
N Note N in Part 3 of Annex VI to Regulation (EC) No 1272/2008
SCL Specific concentration limits methanol - CAS-Nr.: 67-56-1 - EINECS-Nr.: 200-659-6: STOT SE 1, H370: C ≥ 10 %; STOT SE 2, H371: 3 % ≤ C < 10 %.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice	:	Always assess scene safety prior to attempting to rescue casualties and administering first aid. Spillages make surface slippery. Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply. Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces.
Inhalation	:	Inhalation at ambient temperature is unlikely because of the low vapour pressure of the substance. Exposure to vapours may however occur when the substance is handled at high temperatures with poor ventilation. After inhaling the vapours during an accident affected persons are to be moved to well-ventilated area. Get medical help immediately. Check vital signs regularly and act accordingly.
Skin contact	:	Remove contaminated, saturated clothing immediately. Wash area with soap and water for 10 to 15 minutes.
Eye contact	:	Irrigate exposed eyes with 0.9% normal saline if available or water for at least 15 minutes. Remove contact lenses. Irrigate before and after removing the lenses to prevent a carry-over of the substances to the shielded area of the lens. In case of persistent discomforts, an ophthalmologist is to be consulted.
Ingestion, Intake into the Lungs	:	IF SWALLOWED: Immediately call a doctor. Do not induce vomiting as there is high risk of aspiration. If vomiting does occur, have victim lean forward to reduce risk of aspiration.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	By inhalation: May cause: headache, nausea, dizziness. Acute, high dose exposure may cause: central nervous system depression, confusion, altered mental status, seizures, cardiac arrhythmias. By skin contact: Skin irritation. By eye contact: May cause mild reversible eye irritation.
Effects	:	Incidental oral exposure: aspiration hazard; may be fatal if it enters the airways after swallowing.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Symptomatic treatment. If necessary, in-patient treatment in a hospital to be initiated. Upon the intake of doses of more than 1 to 2 ml per kg of body weight activated carbon (approx. 50 g) is to be given and the person hospitalised. Sedative medicaments (upon medical advice) to be applied in the case of strong excitation.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	:	In the case of a small source of fire: Dry extinguishing powder; Foam (specifically trained personnel only); water fog (specifically trained personnel only); carbon dioxide (CO2); Other inert gases (subject to regulations); Sand or earth. In the case of a large source of fire: foam or water in a spraying jet.
Unsuitable extinguishing media	:	Water in a full jet; (could cause splattering and spread the fire); Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2 Special hazards arising from the substance or mixture

Particular hazards due to the substance or the mixture, its products of combustion, or the gases produced during the combustion	:	Evaporated product is heavier than air and rests close to the bottom. The vapours can produce an explosive mixture together with air. Prevent the penetration into the sewer system and rooms at low levels. Prevent the penetration into the soil and waters. This substance will float and can be reignited on surface water. Sources of ignition to be kept off. Use explosion-proof and solvent resistant devices only. Potential combustion products such as CO, SOx, NOx can result and must be observed. (Incomplete) combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.

5.3 Advice for firefighters

Special protecting equipment	:	In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant and chemical resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Further information	:	Containers in the close environment are to be cooled immediately using water spraying and removed from the dangerous zone, if possible. Fire residues and contaminated extinguishing water have to be properly disposed of in accordance with the local official regulations. Ensure a reserve of extinguishing water.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Approaching only in the direction of the wind (changes of the wind directions to be considered). Alert emergency personnel. Stop or contain leak at the source if safe to do so. Remove all the sources of ignition in the close environment. Make explosimeter measurements for determining the dangerous zone and cordon it off. Keep unconcerned persons off the site. Except in case of small spillages: The feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. In case of large spillages, alert occupants in downwind areas. If required, notify relevant authorities according to all applicable regulations. First-aiders must wear personal protective equipment. Affected rooms to be ventilated thoroughly. Avoid contact with the skin. Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: gloves made of PVA (Polyvinyl Alcohol) are not water-resistant, and are not suitable for emergency use. Work helmet. Antistatic non-skid safety shoes or boots. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: A half or full-face respirator with filter(s) for organic vapours or a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only Self Contained Breathing Apparatus's (SCBA) should be used. Avoid direct contact with released material. Avoid the formation of sparks. In the dangerous zone non explosion-proof machinery, devices, and vehicles are to be stopped, no smoking, no actuation of any switch or electrical device that may produce a spark. Evaporated product is heavier than air and propagates close to the ground.

6.2 Environmental precautions

Environmental precautions	:	Stop the source of the spill, if safe to do so. Prevent entry into sewers, water courses, basements or confined areas by erecting sand and/or earth blockings or by means of other suitable blocking measures (floating barriers, skimming and other mechanical means). Contaminated absorbent material may pose the same hazard as the spilled product. Discharge into the environment must be avoided. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Suitable processes for cleaning or absorption or containment	:	Major amounts to be aspirated or pumped over. Residual amounts to be absorbed and/or contained using non-flammable absorbing material like e.g. sand, earth, or oil binding agents. Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use direct jets. Note: When the binding agent is completely loaded the evaporation rate increases and thus, the risk of a fire. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. Large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities. Collect recovered product and other materials in suitable tanks or containers for recovery or safe disposal. All waste is to be filled in properly marked hazardous goods containers and disposed of in accordance with the official regulations.
Unsuitable processes for cleaning or absorption or containment	:	No data available

6.4 Reference to other sections

See also section 8 (personal protective equipment) and 13 (disposal).

Additional advice

Adopt measures according to local conditions and regulations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Information on the safe handling	:	Obtain special instructions before use. Only to be used within a closed system. Vapours to be aspirated at the outlet point. Exhaust gas and exhaust air to be evacuated into the atmosphere only via suitable separators and/or scrubbers. If required ventilation of the room at the bottom level. Contact with the skin, eyes, and clothing to be avoided. Do not ingest. Vapours must not be inhaled. Spilling of the product to be avoided. Use and store only outdoors or in a well-ventilated area. Use personal protective equipment as required. For more information regarding protective equipment and operational conditions see Exposure scenarios.
Advice on protection against fire and explosion	:	Evaporated product is heavier than air and rests close to the bottom. Beware of accumulation in pits and confined spaces. Do not use compressed air for filling, discharging, or handling operations. The vapours can produce an explosive mixture together with air. Prevent the penetration into the sewer system and rooms at low levels. Prevent the penetration into the soil and waters. Measures against electrostatical charging to be taken. All used devices to be earthed or connected via conductors. Sources of ignition to be kept off. Explosion-proof devices / valves and non-sparking tools to be used. No smoking. Ensure that all relevant regulations regarding handling and storage facilities of flammable products are followed.

See also section 8 (personal protective equipment) and 13 (disposal).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Containers to be kept tightly closed and at a thoroughly ventilated place. Only approved stationary containers to be used. All tanks and devices to be earthed or connected via conductors. Storage upon a suitable underground. Normally, a tightly sealed and resistant storage room is required. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Before entering storage tanks and beginning work in enclosed spaces, the air must be tested for oxygen content, air pollutants and explosive atmosphere. Recommended materials for containers, or container linings use mild steel, stainless steel. Unsuitable materials: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer. If the product is supplied in containers: Keep only in the original container. Keep containers properly labelled. Protect from the sunlight. Light hydrocarbon vapours can build up in the headspace of containers. These can cause flammability / explosion hazards. Emptied containers may contain residues of flammable product. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned.
Further information on storage conditions	:	Heat influences to be avoided. Sources of ignition to be kept off.

Advice on common storage	:	Do not store together with: explosive hazardous substances (LGK 1), gases (LGK 2 A), other explosive hazardous substances (LGK 4.1 A), flammable solid hazardous substances (LGK 4.1 B), pyrophoric or self-heating hazardous substances (LGK 4.2), hazardous substances which develop flammable gases upon contact with water (LGK 4.3), highly oxidizing hazardous substances (LGK 5.1 A), ammonium nitrate and preparations containing ammonium nitrate (LGK 5.1 C), organic peroxides and self-reactive hazardous substances (LGK 5.2), non-combustible, acutely toxic cat. 1 and 2 / very toxic hazardous substances (LGK 6.1 B), infectious substances (LGK 6.2), radioactive substances (LGK 7), Restrictions for storage with: oxidizing hazardous substances (LGK 5.1 B), non-combustible hazardous substances that are of acute toxicity cat. 3 / toxic or with chronic effects (LGK 6.1 D), combustible solids (LGK 11), other combustible and non-combustible substances (LGK 10-13), Due to specific storage instructions and because of particular properties of the substances within a storage facility, other restrictions may result from the assessment of the hazards. TRGS 509 resp. 510 must be observed. Ensure that all relevant regulations regarding explosive atmospheres, and handling and storage facilities of flammable products, are followed.

7.3 Specific end use(s)

Information relating to special applications	:	To be used only for the intended purpose, as mentioned in Section 1.2. For information on specific uses refer to the exposure scenarios in the annex.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit values of the product

No data known

Occupational exposure limit values of the components

Components: Intentional ingredients of mixtures and/or markers for substance classification

Fuels, diesel - CAS-No.: 68334-30-5 - EINECS-No.: 269-822-7

Type	mg/m3	ppm	Exceeding coefficient	Note	Source
TLV-TWA	-	20	-	Mixture of hydrocarbons > 25% aromatics,	Austrian Ordinance on Limit Values

methanol - CAS-No.: 67-56-1 - EINECS-No.: 200-659-6

Type	mg/m3	ppm	Exceeding coefficient	Note	Source
TLV-TWA	260	200	-	H	Austrian Ordinance on Limit Values
TLV-STEL	1.040	800	-	H	Austrian Ordinance on Limit Values
Exposure limit at the workplace (8 hr)	260	200	-	H	Directive 2006/15 EC

H Skin resorptive

Biological limit values of the product

No data known

Biological limit values of the components

No data known

DNEL or DMEL of product

End Use: Worker, inhalation, systemic, acute
Value: 4288 mg/m3
DNEL, Most sensitive endpoint: Acute toxicity (by inhalation)

End Use: Worker, inhalation, systemic, long-term
Value: 68,34 mg/m3
DNEL, Most sensitive endpoint: developmental toxicity / teratogenicitiy (dermal)

End Use: Worker, dermal, systemic, long-term exposure
Value: 2,91 mg/kg/day
DNEL, Most sensitive endpoint: repeated dose toxicity, dermal,

End Use: General population, acute exposure, systemic, inhalation
Value: 2572,8 mg/m3
DNEL, Most sensitive endpoint: Acute toxicity (by inhalation)

End Use: General population, long-term exposure, systemic, inhalation
Value: 20,22 mg/m3
DNEL, Most sensitive endpoint: developmental toxicity / teratogenicitiy (dermal)

End Use: General population, long-term exposure, systemic, dermal
Value: 1,25 mg/kg/day
DNEL, Most sensitive endpoint: repeated dose toxicity, dermal,

End Use: General population, long-term exposure, systemic, oral
Value: 1,25 mg/kg/day
DNEL, Most sensitive endpoint: repeated dose toxicity, dermal,

PNEC of product

The main component of the product is a substance of a variable or unknown, complex hydrocarbon composition.
The conventional methods for the determination of PNECs are not appropriate and it is not possible to determine a single representative PNEC for this type of substances.

8.2 Exposure controls

To be used only for the intended purpose, as mentioned in Section 1.2., For information on specific uses refer to the exposure scenarios in the annex.

General safety measures

Hygiene measures	:	Ensure that proper housekeeping measures are in place. Any contact with the eyes, the skin, and clothing to be avoided. Clothing contaminated by that substance to be changed immediately and not to be reused before its cleaning.

Personal protective equipment

Respiratory protection	:	When vapours are produced: respiratory protecting and filtering device with gas filter A, characteristic colour: brown (A1 up to 0,1 % vv, A2 up to 0,5 % vv, A3 up to 1 % vv) to be used. In the case of high concentrations and ambiguous situations a respiratory protecting device independent from the ambient air (breathing apparatus) to be used.
Hand protection	:	Because of the great number of influence factors (e.g. temperature, mechanical stress) the duration of use of the recommended chemical protection gloves can be shorter than the penetration time determined in accordance with EN 374. In case of possible hand contact, wear liquid-proof protective gloves. **Material: Nitrile;** Break through time: 480 min Material thickness: 0,40 mm Test method: DIN EN 374 **Material: Viton;** Break through time: 480 min Material thickness: 0,70 mm Test method: DIN EN 374 **Material: Butyl;** Break through time: 120 min Material thickness: 0,70 mm Test method: DIN EN 374 **Material: Polychloroprene;** Break through time: 60 min Material thickness: 0,60 mm Test method: DIN EN 374
Eye/face protection	:	Safety glasses with side-shields. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated.
Body protection	:	Permanently flame-retardant and permanently antistatic protective clothing to be used. Work helmet. Antistatic non-skid safety shoes or boots. If necessary heat-resistant.

Limitations and supervision of the exposure of the environment

Limitations and supervision of the exposure of the environment	:	Use preferably closed apparatuses. At risk of exposure, suitable extraction should be carried out. Emission limits to be respected, cleaning of the exhaust air to be provided (if required). Also refer to section 6 "Accidental release measures".

Additional advice

In a concrete case and following an individual assessment of the hazards another personal protecting equipment may be required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	light yellowish
Odour	:	characteristic
Odour threshold	:	Odour clearly perceptible

Characteristics	Values	Method	Note
Melting point/Freezing point			Pour Point, not determined
Initial boiling point	approx. 160 °C	EN ISO 3405	
Final boiling point	approx. 370 °C	EN ISO 3405	
Flammability			flammable Chemical Safety Report (CSR) fuels, diesel
Lower explosion limit	approx. 0,6 %(V)		Literature data (Hommel)
Upper explosion limit	approx. 6,5 %(V)		Literature data (Hommel)
Flash point	> 55 °C	EN ISO 2719	
Auto-ignition temperature	>= 225 °C		Chemical Safety Report (CSR) Fuels, diesel
Decomposition temperature			not determined
pH			not applicable
Viscosity, kinematic	2,0 - 4,5 mm2/s at 40 °C	EN ISO 3104	
	>= 1,5 mm2/s at 40 °C		Chemical Safety Report (CSR) Fuels, diesel
Water solubility			practically insoluble
Solubility (other solvents)			Fat solubility: not determined
Partition coefficient (n-octanol/water)			no data available
Vapour pressure	<= 1 kPa at 37,8 °C	EN 13016-1	

Density	820 - 845 kg/m3 at 15 °C	EN ISO 12185, EN ISO 3675	
Relative density			not relevant
Relative vapour density			not determined
Particle characteristics			not relevant, product is liquid

9.2 Other information

Information with regard to physical hazard classes

Characteristics relevant for product	Values	Method	Note
Explosives		Derivation from chemical structure	not explosive; no chemical groups associated with explosive properties in the molecule (CSR Concawe) Fuels, diesel
Oxidising liquids		Derivation from chemical structure	not oxidizing; not able of reacting exothermically with combustible materials (CSR Concawe) Fuels, diesel

Other safety characteristics

no relevant information available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Chemically stable under normal storage and handling conditions, and as per the conditions in section 7.

10.2 Chemical stability

Chemically stable under normal storage and handling conditions, and as per the conditions in section 7.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Explosive vapour/air mixtures can still be present, even inside empty, uncleaned containers. If strongly heated: Danger of spontaneous combustion Reactions with oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid	:	Keep away from heat sources, open flames and other ignition sources

10.5 Incompatible materials

Materials to avoid	:	strong acids and oxidizing agents;

10.6 Hazardous decomposition products

Hazardous decomposition products	:	not determined

Additional advice

Invisible vapour, heavier than air

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Acute oral effect	:	LD50 rat, Method: OECD 420 Test substance: 68334-30-5 Dose: approx. 7.600 mg/kg bw
Acute inhaling effect	:	LC50 rat, Dose: 3,6 mg/l / 4 h Method: OECD 403 Test substance: 68334-30-5
Acute dermal effect	:	LD50 rabbit Dose: > 5 ml/kg bw Method: OECD 434 Test substance: 68334-30-5 (approx. >4.300 mg/kg bw/day)
Acute effect (other)	:	no data available
Other effects	:	no information

Skin corrosion/irritation

Skin irritation	:	rabbit Result: Irritating to skin. Method: OECD 404 Test substance: 68334-30-5

Serious eye damage/irritation

Eye irritation	:	rabbit Result: not irritating Method: OECD 405 Test substance:68334-30-5 Temporary irritation possible

Respiratory or skin sensitisation

sensitisation	:	Method: OECD 406 Test substance: 68334-30-5 No indication of sensitizing effect

Germ cell mutagenicity

Genotoxicity in vitro	:	Ames test Result: negative with metabolic activation Method: Modified Ames Test according to ASTM E 1687 Test substance: 68334-30-5
Genotoxicity in vivo	:	micronucleus assay (clastogenicity) Test substance: 68476-30-2 Method: OECD 475 Result: (negative)
	:	Chromosome aberration test Test substance: 64741-44-2 Method: OECD 475 Result: (negative)
Toxicological Assessment Germ cell mutagenicity	:	Based on available data, the classification criteria are not met., not classified as mutagenic.

Carcinogenicity

Carcinogenic effect	:	Test substance: 10 middle distillates Method: not determined Carcinogenicity test on the mouse dermal, Result: positive LOAEL Dose: 25 mg/kg/bw/day chronic mouse
Toxicological Assessment Carcinogenicity	:	Classified under the EU Regulation CLP (EC) 1272/2008 category 2 H351

Toxicity to reproduction

Reproduction toxicity/fertility	:	Application Route: oral; rat, Test substance: distillates, heavy, C18-50 – branched, cyclic and linear Method: US EPA Health Effects Test Guideline OPPTS 870.3800 and OECD 416 NOAEL (F1); Dose: 1000 mg/kg bw/day
Developmental toxicity/teratogenicity	:	Application Route: dermal; rat, Test substance: 64741-49-7 Method: OECD 414 NOAEL Dose: 125 mg/kg/d (maternal/developmental toxicity)
Toxicological Assessment Developmental toxicity/teratogenicity Reproduction toxicity/fertility	:	Based on available data, the classification criteria are not met. no classification criteria for reproductive toxicity and teratogenicity

Specific Target Organ Toxicity - Single exposure

Specific Target Organ Toxicity - Single exposure	:	Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated exposure

Effect upon repeated or longtime exposure	:	The mixture meets the criteria given in Regulation (EC) No 1272/2008: Based on the available data, the product is classified in respect to specific target organ toxicity upon repeated exposure.
	:	May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure.
	:	NOEL dermal Dose: 0,5 ml/kg (systemic) 0,0001 ml/kg (local) Method: OECD 410 NOAEC (inhalation) dose: >1,71 mg/l/90d (systemic); 0,88 mg/l/90 d (local); method: OECD 413; test substance: most likely 68334-30-5

Aspiration hazard

Aspiration toxicity	:	The mixture meets the criteria given in Regulation (EC) No 1272/2008: Aspiration hazard, Category 1; H304

Neurological effects

Neurological effects	:	no data available
Narcotic effect	:	High concentrations may cause narcotic effects.

Toxicological Assessment

Acute effects	:	The mixture meets the criteria given in Regulation (EC) No 1272/2008: Acute Tox. 4 H332, Harmful if inhaled.
Sensitization	:	No sensitizing characteristics, Based on available data, the classification criteria are not met.
Repeated dose toxicity	:	The mixture meets the criteria given in Regulation (EC) No 1272/2008:, Based on the available data, the product is classified in respect to specific target organ toxicity upon repeated exposure., May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure.

Other information
Data above are for the main component, CAS-Nr. 68334-30-5 (unless stated differently)

11.2 Information on other hazards

Endocrine disrupting properties	:	The currently available information does not indicate that component substances have endocrine disrupting properties as defined by the criteria set out in Section B of Regulation (EU) No 2017/2100.
Other information	:	no data available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute toxicity

Acute toxicity for fish	:	LL50 Species: Oncorhynchus mykiss (rainbow trout) Dose: 65 mg/l Exposure time: 96 h Method: OECD 203
		NOEL Species: Oncorhynchus mykiss (rainbow trout) Dose: 10 mg/l Exposure time: 96 h Method: OECD 203
Acute toxicity for aquatic invertebrates	:	NOEL Species: Daphnia magna (large water flea) Dose: 46 mg/l Exposure time: 48 h Method: OECD 202
Toxicity for algae and aquatic plants	:	ErL50 Species: Pseudokirchneriella subcapitata Dose: 22 mg/l Exposure time: 72 h Method: OECD 201
Toxicity for micro-organisms	:	NOEL Species: Tetrahymena pyriformis Dose: 3.217 mg/l Exposure time: 40 h Test substance: vacuum gas oil, hydrocracked gas oils and distillate fuels Method: QSAR
		EL50 Species: Tetrahymena pyriformis Dose: > 1.000 mg/l Exposure time: 40 h Test substance: vacuum gas oil, hydrocracked gas oils and distillate fuels Method: QSAR
Toxicity to edaphic organisms	:	no data available
Toxicity for terrestrial plants	:	no data available

Toxicity to other terrestrial non -mammalian organisms	:	no data available

Chronic toxicity

Toxicity to fish (Chronic toxicity)	:	NOEL Species: Oncorhynchus mykiss (rainbow trout) Dose: 0,083 mg/l Exposure time: 14 d Test substance: vacuum gas oil, hydrocracked gas oils and distillate fuels Method: QSAR
Toxicity to daphnia and other aquatic invertebrates. (Chronic toxicity)	:	NOEL Species: Daphnia magna Dose: 0,2 mg/l Exposure time: 21 d Test substance: vacuum gas oil, hydrocracked gas oils and distillate fuels Method: (Q)SAR

Ecotoxicological Assessment

Aquatic Acute	:	EL50: >1000 mg/l/ 40h; NOEL: 3,217 mg/l, No classification criteria for acute aquatic toxicity
Aquatic Chronic	:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Toxicity Data on Soil	:	no data available
Other organisms relevant to the environment	:	no data available

12.2 Persistence and degradability

Persistence,Biodegradability	:	Not readily biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation	:	No convincing data available. Bioaccumulative potential (Partition coefficient (n-octanol/water)): no data available

12.4 Mobility in soil

Mobility	:	Remarks: Do not allow the product to be released uncontrolled into the environment.
Transport between environmental compartments	:	no data available
Physical-chemical eliminability	:	The product is insoluble and floats on water. May be separated mechanically in waste water plants.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	:	The main component of the product is a substance of a variable or unknown, complex hydrocarbon composition., Further information relevant for the PBT assessment of this substance is necessary., Some of the samples of this substance for which analytical data is available contain constituents included in the SVHC candidate list as PBT/vPvB at concentrations above 0.1%., No other representative hydrocarbon structures were found to meet the PBT / vPvB criteria.

12.6 Endocrine disrupting properties

Endocrine disrupting properties	:	The currently available information does not indicate that component substances have endocrine disrupting properties as defined by the criteria set out in Section B of Regulation (EU) No 2017/2100.

12.7 Other adverse effects

Other adverse effects	:	Prevent from entering sewage system, water bodies and ground. In the case of accidents call for assistance by professional oil-fighting forces.
	:	Data above are for the main component, CAS-Nr. 68334-30-5 (unless stated differently)

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Information on the disposal of the product	**:**	ÖNORM S 2100, key code group 54 Product residues are to be disposed of in accordance with the legal stipulations.
Contaminated packaging	**:**	If the product has been supplied within a packaging, the empty original containers are to be reused preferably or, if this is not possible, they are to be recycled preferably.Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned.
Waste code according to European List of Wastes when using as described in Section 1.:		
Waste from residues	**:**	13 07 01* fuel oil and Diesel
Contaminated packaging	**:**	15 01 10* packaging which contain residues of hazardous substances or which are contaminated by hazardous substances

Additional advice

The Waste Code depends on the origin of the waste and can deviate from the above data in a specific case.
Final decisions on the appropriate waste management method, in line with regional, national and European legislation, and possible adaptation to local conditions, remains the responsibility of the waste treatment operator.

SECTION 14: TRANSPORT INFORMATION

Road transport (ADR)

14.1	**UN number**	:	1202
14.2	**UN proper shipping name**	:	DIESEL FUEL

14.3	**Transport hazard class(es)**	:	3
14.4	**Packing group**	:	III
14.5	**Environmental hazards**	:	yes
14.6	**Special precautions for user**	:	See section 7 and references therein.

Further information

Number to designate the hazard	:	30
ADR/RID-Labels	:	3
Classification Code	:	F1
Tunnel restriction code	:	(D/E)
Advice	:	Danger Label No 3, Fish and tree - Environmentally hazardous substance mark, Special provision 640L

Rail transport (RID)

14.1	**UN number**	:	1202
14.2	**UN proper shipping name**	:	DIESEL FUEL
14.3	**Transport hazard class(es)**	:	3
14.4	**Packing group**	:	III
14.5	**Environmental hazards**	:	yes
14.6	**Special precautions for user**	:	See section 7 and references therein.

Further information

Number to designate the hazard	:	30

ADR/RID-Labels	:	3
Classification Code	:	F1
Advice	:	Danger Label No 3, Fish and tree - Environmentally hazardous substance mark, Special provision 640L

Inland navigation with tanker barges (ADN)

14.1	**UN number**	:	1202
14.2	**UN proper shipping name**	:	DIESEL FUEL
14.3	**Transport hazard class(es)**	:	3
14.4	**Packing group**	:	III
14.5	**Environmental hazards**	:	yes
14.6	**Special precautions for user**	:	See section 7 and references therein.

Further information

Advice	:	(N2+F)

Sea transport (IMDG)

14.1	**UN number**	:	1202
14.2	**UN proper shipping name**	:	DIESEL FUEL
14.3	**Transport hazard class(es)**	:	3
14.4	**Packing group**	:	III
14.5	**Marine pollutant**	:	yes
14.6	**Special precautions for user**	:	See section 7 and references therein.
14.7	**Maritime transport in bulk according to IMO instruments**	:	MARPOL Annex 1

Further information

ICAO hazard labels	:	3
EmS	:	F-E, S-E

Air transport (ICAO-TI/IATA-DGR)

14.1	**UN number**	:	1202
14.2	**UN proper shipping name**	:	DIESEL FUEL
14.3	**Transport hazard class(es)**	:	3
14.4	**Packing group**	:	III
14.5	**Environmental hazards**	:	yes

14.6	**Special precautions for user**	**:**	See section 7 and references therein.

Further information

ICAO hazard labels	**:**	3

Additional advice

In case of need further information on the transport classification can be requested from the producer.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

ASchG, BGBl. No. 450/1994	**:**	Dangerous substance at workplace
Regulation on flammable liquids – VbF Hazard Categories according to BGBl. II No. 45/2023	**:**	Hazard Category 4: a) Gas oils (§ 4 Z 48)

Community provisions on the protection of the health and the environment

Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) - Chapter V - Special provisions for installations and activities using organic solvents.	**:**	When properly used, product is not subject to VOC-Guideline (see Section 1.2).
Regulation (EC) no. 1907/2006, Annex XVII (REACH-regulation)	**:**	No. 3: Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.
Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC (SEVESO III).	**:**	Annex I, Part 1: P5c FLAMMABLE LIQUIDS E2 Hazardous to the Aquatic Environment in Category Chronic 2. Annex I Part 2: 34. Petroleum products and alternative fuels. (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams).
Council Directive 92/85/EEC of 19 October 1992 on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding (tenth individual Directive within the meaning of Article 16 (1) of Directive 89/391/EEC)	**:**	This product is subject to the restrictions set by the national legislation transposing the Directive.

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work	:	This product is subject to the restrictions set by the national legislation transposing the Directive.

15.2 Chemical Safety Assessment

A chemical safety assessment for the main constituent was performed within the framework of the REACH registration. It was verified that control of the main constituent as a lead substance ensures appropriate control of all other constituents of the mixture. Therefore, the scenarios listed in the Annex are those developed for the main substance CAS-NR.: 68334-30-5

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
Asp. Tox.	Aspiration hazard
Carc.	Carcinogenicity
Flam. Liq.	Flammable liquids
Skin Irrit.	Skin corrosion/irritation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H370	Causes damage to organs (optic nerve (nervus opticus), central nervous system).
H373	May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Further information

Other information	:	Overall updates from the previous main version, not marked as stated at Additional advice, have been implemented in: Section 15.1
		List of acronyms: (Q)SAR = Quantitative Structure Activity Relationship ADN = European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways ADR = Agreement Concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = bioconcentration factor CAS-No = Chemical Abstracts Service number

	CMR = Carcinogen, Mutagen, or toxic to Reproduction CSA = Chemical Safety Assessment CSR = Chemical Safety Report DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EC50 = The effective concentration of substance that causes 50% of the maximum response. ECHA = European Chemicals Agency EC-Number = EINECS and ELINCS Number (see also EINECS and ELINCS) EINECS = European Inventory of Existing Commercial Chemical Substances EL50 = effective load 50% ELINCS = European List of notified Chemical Substances EPA = Environmental Protection Agency(U.S.) GES = Generic Exposure Scenario HFO = heavy fuel oil IATA = International Air Transport Association IC50 = inhibition concentration 50% ICAO-TI = Technical Instructions for the Safe Transport of Dangerous Goods by Air IMDG = International Maritime Dangerous Goods Kow = octanol-water partition coefficient Koc = soil organic carbon-water partitioning coefficient LC50 = Lethal Concentration to 50 % of a test population LD50 = Lethal Dose to 50% of a test population (Median Lethal Dose) LL50 = Lethal Load 50% LOAEC = Lowest Observed Adverse Effect Concentration LOAEL = Lowest Observed Adverse Effect Level NOAEC = No Observed Adverse Effect Concentration NOAEL = No Observed Adverse Effect Level NOEC = No Observed Effect Concentration NOEL = No Observed Effect Level OECD = Organization for Economic Co-operation and Development BLV = Biological Limit Value OEL = Occupational Exposure Limit OSHA = European Agency for Safety and Health at work PBT = Persistent, Bioaccumulative and Toxic substance PEC = Predicted Effect Concentration PNEC = Predicted No Effect Concentration REACH = Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals RID = Regulations concerning the International Carriage of Dangerous Goods by Rail RMM = Risk Management Measure SVHC = Substances of Very High Concern TRA = Targeted Risk Assessment TLV = Threshold Limit Value STEL = Short term exposure limit TWA = Time-Weighted Average UVCB = substance of unknown or variable composition, complex reaction products or biological materials vPvB = very Persistent and very Bioaccumulative LGK = Storage class TRGS = Technical Rules for Hazardous Substances (Germany)
Advice on training for workers :	Education and training of workers in understanding the hazards and control measures relevant to their activities.

Sources of information	:	Chemical Safety Report (CSR) Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]: Flam. Liq. 3 H226 - On basis of test data Acute Tox. 4 H332 - Calculation method Skin Irrit. 2 H315 - Calculation method Asp. Tox. 1 H304 - On basis of test data Carc. 2 H351 - Calculation method STOT RE 2 H373 - Calculation method Aquatic Chronic 2 H411 - Calculation method

Markings (|) in the left border and/or text in red indicate changes in the previous main version.
The above data are in accordance with our knowledge and experience at the given date of revision and exclusively refer to the product in its as-delivered condition as it is unambiguously identifiable by the product number. In the case of usages deviating from those given in section 1 or when the product is mixed with other materials or is altered in the course of a production process, the statements given in the material safety data sheet may not apply without restrictions or even not at all any more. The data are not applicable to other products of the same or a similar designation.
The product should not be used other than for the stated application or applications without seeking advice from the supplier.
It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.
You can contact the supplier to ensure that this document is the most current available.
Alteration of this document is strictly prohibited.

Annex

The exposure scenarios for the most frequent applications are listed below. If required, other exposure scenarios will be provided upon request.

1. Brief title of the Exposure Scenario: 02 - Formulation & (re)packing of substances and mixtures (classified)

Life-cycle stage	:	**F:** Formulation or re-packing
Sector of use	:	not applicable
Process category	:	**PROC1:** Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. **PROC2:** Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions **PROC3:** Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition **PROC4:** Chemical production where opportunity for exposure arises **PROC5:** Mixing or blending in batch processes **PROC8a:** Transfer of substance or mixture (charging and discharging) at non-dedicated facilities **PROC8b:** Transfer of substance or mixture (charging and discharging) at dedicated facilities **PROC9:** Transfer of substance or mixture into small containers (dedicated filling line, including weighing) **PROC14:** Tabletting, compression, extrusion, pelletisation, granulation **PROC15:** Use as laboratory reagent **PROC28:** Manual maintenance (cleaning and repair) of machinery
Environmental release category	:	**ERC2:** Formulation into mixture
Further information	:	Specific Environmental Release Category ESVOC SpERC 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.

2.1 Contributing scenario controlling environmental exposure for:

ERC2, Formulation into mixture

Amount used

Regional use tonnage	:	27 10E6 t/y
Annual site tonnage (tonnes/year)	:	30.000
Maximum daily site tonnage (kg/day)	:	100.000
Fraction of EU tonnage used in region	:	0,1
Fraction of Regional tonnage used locally	:	0,001
Remarks	:	Substance is complex UVCB. Predominantly hydrophobic.

MSafe (maximum allowable site tonnage)	:	150.000 kg/day
Remarks	:	Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal

Frequency and duration of use

Continuous exposure	:	300 Emission days (days/year), Continuous release.

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

Emission or Release Factor: Air	:	0,01 %
Emission or Release Factor: Water	:	0,001 %
Emission or Release Factor: Soil	:	0,001 %
Remarks	:	Release to water is release to wastewater. Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) Release factors water and soil refer to initial release prior to RMM.

Technical conditions and measures / Organizational measures;

Air	:	Treat air emission to provide a typical removal efficiency of: 0 %
Water,	:	Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency >= (%): 92,1 %
Water,	:	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0 %
Remarks	:	Common practices vary across sites thus conservative process release estimates used. Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant	:	Domestic treatment plant
Flow rate of sewage treatment plant effluent	:	2.000 m3/d
Effectiveness (STP)	:	94,8 %
Total removal from wastewater according to internal and external location measures	:	94,8 %
Sludge Treatment	:	Organisation measures to prevent/limit release from site: Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Remarks	:	Conditions and measures related to municipal sewage treatment plant:, Not applicable as there is no release to wastewater.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery Methods	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

2.2 Contributing scenario controlling worker exposure for:

PROC1 : Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2	:	**Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions**
PROC3	:	**Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition**
PROC4	:	**Chemical production where opportunity for exposure arises**
PROC5	:	**Mixing or blending in batch processes**
PROC8a	:	**Transfer of substance or mixture (charging and discharging) at non-dedicated facilities**
PROC8b	:	**Transfer of substance or mixture (charging and discharging) at dedicated facilities**
PROC9	:	**Transfer of substance or mixture into small containers (dedicated filling line, including weighing)**
PROC14	:	**Tabletting, compression, extrusion, pelletisation, granulation**
PROC15	:	**Use as laboratory reagent**
PROC28	:	**Manual maintenance (cleaning and repair) of machinery**

Product characteristics

Concentration of the Substance in Mixture/Article		Covers percentage substance in the product up to 100 % (unless stated differently)
Physical Form (at time of use)	:	Liquid, with potential for aerosol generation
Vapour pressure	:	Vapour Pressure is given at STP. < 5 hPa
Remarks	:	Assumes a good basic standard of occupational hygiene is implemented, Covers use at ambient temperatures (unless stated differently).

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently)	:	8 h

Technical conditions and measures

CS135 General measures applicable to all activities
Minimise exposure using measures such as contained and enclosed systems, properly designed and maintained dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance.

CS136 Batch processes at elevated temperatures
(PROC 3)
Provide extract ventilation to points where emissions occur. Handle substance within a closed system. Assumes process temperature up to 60.0 °C.

G19 General measures (skin irritants)
No specific measures identified.

General Measures (flammability).
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.

General Measures (aspiration).
No other specific measures identified.

CS15 General exposures (closed systems).
(PROC 1, PROC 2, PROC 3)
Handle substance within a closed system. Sample via a closed loop or other system to avoid exposure.

CS16 General exposures (open systems).
(PROC 4)
No other specific measures identified.

CS2 Process sampling
(PROC 9)
No other specific measures identified.

CS8 Drum/batch transfers
(PROC 8b)
No specific measures identified.

CS34 Manual; CS22 Transfer from/pouring from containers; CS82 Non-dedicated facility
(PROC 8b)
Use drum pumps.

CS14 Bulk Transfers.
(PROC 8b)
Handle substance within a closed system.

CS30 mixing operations (open systems)
(PROC 5)
Provide extract ventilation to points where emissions occur.

CS100 Production or preparation or articles by tabletting, compression, extrusion or pelletisation
(PROC 14)
No other specific measures identified.

CS6 Drum and small package filling
(PROC 9)
No other specific measures identified.

CS36 Laboratory activities
(PROC 8a, PROC 28)
No other specific measures identified.

CS39 Equipment cleaning and maintenance.
(PROC 1, PROC 2)
Drain down and flush system prior to equipment break-in or maintenance.

CS67 Storage.
Store substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure:

CS135 General measures applicable to all activities
Ensure staff are informed of and trained on the nature of exposure and basic actions to minimise exposure. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance.

CS136 Batch processes at elevated temperatures
(PROC 3)
No other specific measures identified.

G19 General measures (skin irritants)
No other specific measures identified.

General Measures (flammability).
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.

General Measures (aspiration).
No other specific measures identified.

CS15 General exposures (closed systems).
(PROC 1, PROC 2, PROC 3)
No other specific measures identified.

CS16 General exposures (open systems).
(PROC 4)
No other specific measures identified.

CS2 Process sampling
(PROC 9)
No other specific measures identified.

CS8 Drum/batch transfers
(PROC 8b)
No specific measures identified

CS34 Manual; CS22 Transfer from/pouring from containers; CS82 Non-dedicated facility
(PROC 8b)
No specific measures identified

CS14 Bulk Transfers.
(PROC 8b)
No specific measures identified.

CS30 mixing operations (open systems)
(PROC 5)
No other specific measures identified.

CS100 Production or preparation or articles by tabletting, compression, extrusion or pelletisation
(PROC 14)
No other specific measures identified.

CS6 Drum and small package filling
(PROC 9)
No other specific measures identified.

CS36 Laboratory activities
(PROC 8a, PROC 28)
No other specific measures identified.

CS39 Equipment cleaning and maintenance.
(PROC 1, PROC 2)
No other specific measures identified.

CS67 Storage.
No other specific measures identified.

Conditions and measures related to personal protection, hygiene and health evaluation

CS135 General measures applicable to all activities
Wear suitable coveralls to prevent exposure to the skin. Wear suitable gloves tested to EN374. Wear respiratory protection when its use is identified for certain contributing scenarios. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point.

CS136 Batch processes at elevated temperatures
(PROC 3)
No other specific measures identified.

G19 General measures (skin irritants)
Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS.

General Measures (flammability).
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.

General Measures (aspiration).
Do not ingest. If swallowed then seek immediate medical assistance.

CS15 General exposures (closed systems).
(PROC 1, PROC 2, PROC 3)
No other specific measures identified.

CS16 General exposures (open systems).
(PROC 4)
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

CS2 Process sampling
(PROC 9)
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

CS8 Drum/batch transfers
(PROC 8b)
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Ensure no splashing occurs during transfer.

CS34 Manual; CS22 Transfer from/pouring from containers; CS82 Non-dedicated facility
(PROC 8b)
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Ensure no splashing occurs during transfer.

CS14 Bulk Transfers.
(PROC 8b)
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

CS30 mixing operations (open systems)
(PROC 5)
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

CS100 Production or preparation or articles by tabletting, compression, extrusion or pelletisation
(PROC 14)
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

CS6 Drum and small package filling
(PROC 9)
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.
CS36 Laboratory activities
(PROC 8a, PROC 28)
No other specific measures identified.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Put lids on containers immediately after use.
CS39 Equipment cleaning and maintenance.
(PROC 1, PROC 2)
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Wear suitable coveralls to prevent exposure to the skin. Clear spills immediately.
CS67 Storage.
No other specific measures identified.

3. Exposure estimation and reference to its source

3.1. Health:
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
3.2. Environment:
The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by 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. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not support the need for a DNEL to be established for other health effects. Available hazard data do not enable the derivation of a DNEL for aspiration effects. Risk Management Measures are based on qualitative risk characterisation.
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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (https://cefic.org/app/uploads/2019/01/SPERCs-Specific-Envirnonmental-Release-Classes-REACHImpl-ES-CSA-CSR.pdf)
Maximum Risk Characterisation Ratio for Air Emissions RCRair
0,011
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater
0,066

1. Brief title of the Exposure Scenario: 12a - Use as a fuel - Industrial (classified)

Life-cycle stage	:	**IS:** Use at industrial sites
Sector of use	:	not applicable
Process category	:	**PROC1:** Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. **PROC2:** Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions **PROC8a:** Transfer of substance or mixture (charging and discharging) at non-dedicated facilities **PROC8b:** Transfer of substance or mixture (charging and discharging) at dedicated facilities **PROC16:** Use of fuels **PROC28:** Manual maintenance (cleaning and repair) of machinery
Environmental release category	:	**ERC7:** Use of functional fluid at industrial site
Further information	:	Specific Environmental Release Category ESVOC SpERC 7.12a.v1
Processes, tasks, activities covered	:	Covers the use as a fuel or in fuels (or fuel additives and additive components) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

2.1 Contributing scenario controlling environmental exposure for:

ERC7, Use of functional fluid at industrial site

Amount used

Regional use tonnage	:	3,4 10E6 t/y
Annual site tonnage	:	1,5 10E6 t/y
Maximum daily site tonnage (kg/day)	:	5 10E6
Fraction of EU tonnage used in region	:	0,1
Fraction of Regional tonnage used locally	:	0,44
Remarks	:	Substance is complex UVCB. Predominantly hydrophobic.
MSafe (maximum allowable site tonnage)	:	5,5 10E6 kg/day
Remarks	:	Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal

Frequency and duration of use

Continuous exposure	:	300 Emission days (days/year), Continuous release.

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

Emission or Release Factor: Air	:	0,005 %

Emission or Release Factor: Water	:	0,001 %
Emission or Release Factor: Soil	:	0 %
Remarks	:	All release factors refer to initial release prior to RMM. Release to water is release to wastewater.

Technical conditions and measures / Organizational measures;

Air	:	Treat air emission to provide a typical removal efficiency of: 95,0 %
Water,	:	Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency >= (%): 94,2 %
Water,	:	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0 %
Remarks	:	Common practices vary across sites thus conservative process release estimates used. Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant	:	Domestic treatment plant
Flow rate of sewage treatment plant effluent	:	2.000 m3/d
Effectiveness (STP)	:	94,8 %
Total removal from wastewater according to internal and external location measures	:	94,8 %
Sludge Treatment	:	Organisation measures to prevent/limit release from site: Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Remarks	:	Conditions and measures related to municipal sewage treatment plant:, Not applicable as there is no release to wastewater.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	:	Combustion emissions limited by required exhaust emission controls., Combustion emissions considered in regional exposure assessment., External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery Methods	:	This substance is consumed during use and no waste of the substance is generated.

2.2 Contributing scenario controlling worker exposure for:

PROC1 : Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 : Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC8a : Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b : Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC16 : Use of fuels

PROC28 : Manual maintenance (cleaning and repair) of machinery

Product characteristics

Concentration of the Substance in Mixture/Article		Covers percentage substance in the product up to 100 % (unless stated differently)
Physical Form (at time of use)	:	Liquid, with potential for aerosol generation
Vapour pressure	:	Vapour Pressure is given at STP. < 5 hPa

Remarks	:	Assumes a good basic standard of occupational hygiene is implemented, Covers use at ambient temperatures (unless stated differently).

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently)	:	8 h

Technical conditions and measures

CS135 General measures applicable to all activities
Minimise exposure using measures such as contained and enclosed systems, properly designed and maintained dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance.
G19 General measures (skin irritants)
No other specific measures identified.
General Measures (flammability).
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.
General Measures (aspiration).
No other specific measures identified.
CS15 General exposures (closed systems).
(PROC 1, PROC 2)
Handle substance within a closed system. Sample via a closed loop or other system to avoid exposure.
CS14 Bulk Transfers.
(PROC 8b)
No other specific measures identified.
CS8 Drum/batch transfers
(PROC 8b)
No other specific measures identified.
GEST_12l Use as a fuel, CS107 (closed systems)
(PROC 16)
Handle substance within a closed system.
CS39 Equipment cleaning and maintenance
(PROC 8a, PROC 28)
Drain down and flush system prior to equipment break-in or maintenance.
CS67 Storage.
(PROC 1, PROC 2)
Store substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure:

CS135 General measures applicable to all activities
Ensure staff are informed of and trained on the nature of exposure and basic actions to minimise exposure. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance.
G19 General measures (skin irritants)
No other specific measures identified.
General Measures (flammability).
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.
General Measures (aspiration).
No other specific measures identified.
CS15 General exposures (closed systems).
(PROC 1, PROC 2)
No other specific measures identified.
CS14 Bulk Transfers.
(PROC 8b)
No other specific measures identified.
CS8 Drum/batch transfers
(PROC 8b)
No other specific measures identified.
GEST_12I Use as a fuel, CS107 (closed systems)
(PROC 16)
No other specific measures identified.
CS39 Equipment cleaning and maintenance
(PROC 8a, PROC 28)
No other specific measures identified.
CS67 Storage.
(PROC 1, PROC 2)
No other specific measures identified.

Conditions and measures related to personal protection, hygiene and health evaluation

CS135 General measures applicable to all activities
Wear suitable coveralls to prevent exposure to the skin. Wear suitable gloves tested to EN374. Wear respiratory protection when its use is identified for certain contributing scenarios. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point.

G19 General measures (skin irritants)
Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS.

General Measures (flammability).
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.

General Measures (aspiration).
Do not ingest. If swallowed then seek immediate medical assistance.

CS15 General exposures (closed systems).
(PROC 1, PROC 2)
No other specific measures identified.

CS14 Bulk Transfers.
(PROC 8b)
For further specification, refer to section 8 of the SDS. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Ensure no splashing occurs during transfer.

CS8 Drum/batch transfers
(PROC 8b)
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Ensure no splashing occurs during transfer.

GEST_12I Use as a fuel, CS107 (closed systems)
(PROC 16)
No other specific measures identified.

CS39 Equipment cleaning and maintenance
(PROC 8a, PROC 28)
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Wear suitable coveralls to prevent exposure to the skin. Clear spills immediately.

CS67 Storage.
(PROC 1, PROC 2)
No other specific measures identified.

3. Exposure estimation and reference to its source

3.1. Health:
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
3.2. Environment:
The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by 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. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Available hazard data do not enable the derivation of a DNEL for aspiration effects. Risk Management Measures are based on qualitative risk characterisation.
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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (https://cefic.org/app/uploads/2019/01/SPERCs-Specific-Envirnonmental-Release-Classes-REACHImpl-ES-CSA-CSR.pdf)
Maximum Risk Characterisation Ratio for Air Emissions RCRair
0,014
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater
0,90

1. Brief title of the Exposure Scenario: 12b - Use as a fuel: Professional (classified)

Life-cycle stage	:	**PW:** Widespread use by professional workers
Sector of use	:	not applicable
Process category	:	**PROC1:** Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. **PROC2:** Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions **PROC8a:** Transfer of substance or mixture (charging and discharging) at non-dedicated facilities **PROC8b:** Transfer of substance or mixture (charging and discharging) at dedicated facilities **PROC16:** Use of fuels **PROC28:** Manual maintenance (cleaning and repair) of machinery
Environmental release category	:	**ERC9a:** Widespread use of functional fluid (indoor) **ERC9b:** Widespread use of functional fluid (outdoor)
Further information	:	Specific Environmental Release Category ESVOC SpERC 9.12b.v1
Processes, tasks, activities covered	:	Covers the use as a fuel or in fuels (or fuel additives and additive components) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

2.1 Contributing scenario controlling environmental exposure for:

ERC9a, Widespread use of functional fluid (indoor)

ERC9b, Widespread use of functional fluid (outdoor)

Amount used

Regional use tonnage	:	5,3 10E6 t/y
Annual site tonnage (tonnes/year)	:	2.700
Maximum daily site tonnage (kg/day)	:	7.300
Fraction of EU tonnage used in region	:	0,1
Fraction of Regional tonnage used locally	:	0,0005
Remarks	:	Substance is complex UVCB. Predominantly hydrophobic.
MSafe (maximum allowable site tonnage)	:	170.000 kg/day
Remarks	:	Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal

Frequency and duration of use

Continuous exposure	:	365 Emission days (days/year), Continuous release.

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

Emission or Release Factor: Air	:	0,005 %
Emission or Release Factor: Water	:	0,001 %
Emission or Release Factor: Soil	:	0,001 %
Remarks	:	All release factors refer to release from wide dispersive use. Release factors for air and soil refer to regional use only. Release to water is release to wastewater.

Technical conditions and measures / Organizational measures;

Air	:	Treat air emission to provide a typical removal efficiency of : not applicable:
Water,	:	Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency >= (%): 0 %
Water,	:	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%): 0 %
Remarks	:	Common practices vary across sites thus conservative process release estimates used. Risk from environmental exposure is driven by freshwater. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant	:	Domestic treatment plant
Flow rate of sewage treatment plant effluent	:	2.000 m3/d
Effectiveness (STP)	:	94,8 %
Total removal from wastewater according to internal and external location measures	:	94,8 %
Sludge Treatment	:	Organisation measures to prevent/limit release from site: Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Remarks	:	Conditions and measures related to municipal sewage treatment plant:, Not applicable as there is no release to wastewater.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	:	Combustion emissions limited by required exhaust emission controls., Combustion emissions considered in regional exposure assessment., External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery Methods	:	This substance is consumed during use and no waste of the substance is generated.

2.2 Contributing scenario controlling worker exposure for:

PROC1 : Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 : Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC8a : Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b : Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC16 : Use of fuels

PROC28 : Manual maintenance (cleaning and repair) of machinery

Product characteristics

Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 % (unless stated differently)

Physical Form (at time of use)	:	Liquid, with potential for aerosol generation
Vapour pressure	:	Vapour Pressure is given at STP. < 5 hPa
Remarks	:	Assumes a good basic standard of occupational hygiene is implemented, Covers use at ambient temperatures (unless stated differently).

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently)	:	8 h

Technical conditions and measures

CS135 General measures applicable to all activities
Minimise exposure using measures such as contained and enclosed systems, properly designed and maintained dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance.
G19 General measures (skin irritants)
No other specific measures identified.
General Measures (flammability).
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.
General Measures (aspiration).
No other specific measures identified.
CS15 General exposures (closed systems).
(PROC 1, PROC 2)
Handle substance within a closed system. Sample via a closed loop or other system to avoid exposure.
CS14 Bulk Transfers.
(PROC 8b)
No other specific measures identified.
CS8 Drum/batch transfers
(PROC 8b)
Use drum pumps.
CS507 Refuelling activities
(PROC 8b)
No other specific measures identified.
GEST_12I Use as a fuel, CS107 (closed systems)
(PROC 16)
Handle substance within a closed system.
CS39 Equipment cleaning and maintenance.
(PROC 8a, PROC 28)
Drain down and flush system prior to equipment break-in or maintenance.
CS67 Storage.
(PROC 1, PROC 2)
Store substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure:

CS135 General measures applicable to all activities
Ensure staff are informed of and trained on the nature of exposure and basic actions to minimise exposure. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance.
G19 General measures (skin irritants)
No other specific measures identified.
General Measures (flammability).
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.
General Measures (aspiration).
No other specific measures identified.
CS15 General exposures (closed systems).
(PROC 1, PROC 2)
No other specific measures identified.
CS14 Bulk Transfers.
(PROC 8b)
No other specific measures identified.
CS8 Drum/batch transfers
(PROC 8b)
No other specific measures identified.
CS507 Refuelling activities
(PROC 8b)
No other specific measures identified.
GEST_12I Use as a fuel, CS107 (closed systems)
(PROC 16)
No other specific measures identified.
CS39 Equipment cleaning and maintenance.
(PROC 8a, PROC 28)
No other specific measures identified.
CS67 Storage.
(PROC 1, PROC 2)
No other specific measures identified.

Conditions and measures related to personal protection, hygiene and health evaluation

CS135 General measures applicable to all activities
Wear suitable coveralls to prevent exposure to the skin. Wear suitable gloves tested to EN374. Wear respiratory protection when its use is identified for certain contributing scenarios. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point.

G19 General measures (skin irritants)
Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS.

General Measures (flammability).
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.

General Measures (aspiration).
Do not ingest. If swallowed then seek immediate medical assistance.

CS15 General exposures (closed systems).
(PROC 1, PROC 2)
No other specific measures identified.

CS14 Bulk Transfers.
(PROC 8b)
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Ensure no splashing occurs during transfer.

CS8 Drum/batch transfers
(PROC 8b)
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Ensure no splashing occurs during transfer.

CS507 Refuelling activities
(PROC 8b)
Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Ensure no splashing occurs during transfer.

GEST_12l Use as a fuel, CS107 (closed systems)
(PROC 16)
No other specific measures identified.

CS39 Equipment cleaning and maintenance.
(PROC 8a, PROC 28)
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.
Wear suitable coveralls to prevent exposure to the skin. Clear spills immediately.

CS67 Storage.
(PROC 1, PROC 2)
No other specific measures identified.

3. Exposure estimation and reference to its source

3.1. Health:
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
3.2. Environment:
The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by 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. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Available hazard data do not enable the derivation of a DNEL for aspiration effects. Risk Management Measures are based on qualitative risk characterisation.
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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (https://cefic.org/app/uploads/2019/01/SPERCs-Specific-Envirnonmental-Release-Classes-REACHImpl-ES-CSA-CSR.pdf)
Maximum Risk Characterisation Ratio for Air Emissions RCRair
0,004
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater
0,042

1. Brief title of the Exposure Scenario: 12c - Use as a fuel - Consumer (classified)

Life-cycle stage	:	**C:** Consumer use
Sector of use	:	not applicable
Product category	:	**PC13:** Fuels
Environmental release category	:	**ERC9a:** Widespread use of functional fluid (indoor) **ERC9b:** Widespread use of functional fluid (outdoor)
Further information	:	Specific Environmental Release Category ESVOC SpERC 9.12c.v1
Processes, tasks, activities covered	:	Covers consumer uses in liquid fuels

2.1 Contributing scenario controlling environmental exposure for:

ERC9a, Widespread use of functional fluid (indoor)

ERC9b, Widespread use of functional fluid (outdoor)

Product characteristics

Amount used

Regional use tonnage	:	18 10E6 t/y
Annual site tonnage (tonnes/year)	:	9.100
Maximum daily site tonnage (kg/day)	:	25.000
Fraction of EU tonnage used in region	:	0,1
Fraction of Regional tonnage used locally	:	0,0005
Remarks	:	Substance is complex UVCB. Predominantly hydrophobic.
MSafe (maximum allowable site tonnage)	:	610.000 kg/day
Remarks	:	Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal

Frequency and duration of use

Continuous exposure	:	365 Emission days (days/year), Continuous release.

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

Emission or Release Factor: Air	:	0,01 %
Emission or Release Factor: Water	:	0,001 %
Emission or Release Factor: Soil	:	0,005 %
Remarks	:	All release factors refer to release from wide dispersive use. Release factors for air and soil refer to regional use only. Release to water is release to wastewater.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant	:	Domestic treatment plant
Flow rate of sewage treatment plant effluent	:	2.000 m3/d

Effectiveness (STP)	:	94,8 %
Remarks	:	Conditions and measures related to municipal sewage treatment plant:, Not applicable as there is no release to wastewater.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	:	Combustion emissions limited by required exhaust emission controls., Combustion emissions considered in regional exposure assessment., External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

Recovery Methods	:	This substance is consumed during use and no waste of the substance is generated.

2.2 Contributing scenario controlling consumer exposure for:

PC13 : Fuels

Product characteristics

Concentration of the Substance in Mixture/Article	:	Unless otherwise stated, cover concentrations up to 100%.
Physical Form (at time of use)	:	Liquid
Vapour pressure	:	Vapour pressure > 0,1 hPa
Remarks	:	Unless otherwise stated assumes use at ambient temperatures.

Other given operational conditions affecting consumers exposure

Activity (outdoor/indoor)	:	PC13:Fuels--Liquid - subcategories added: Automotive Refuelling (Diesel), Outdoor use.
Remarks	:	Unless otherwise stated, covers concentrations up to 100%., Covers use up to 52 days/year., Covers use up to 1 time/on day of use., Assumes that potential dermal contact is limited to palm of one hand., For each use event, covers use amounts up to 44000g., Covers outdoor use., For each use event, covers exposure up to 0,05hr/event.
Activity (outdoor/indoor)	:	PC13:Fuels--Liquid -: Home space heater
Room size	:	20 M3
Remarks	:	Unless otherwise stated, covers concentrations up to 100%., Covers use up to 180 days/year., Covers use up to 1 time/on day of use., Assumes that potential dermal contact is limited to palm of one hand., For each use event, covers use amounts up to 3320g., For each use event, covers exposure up to 0.033 hr/event.
Activity (outdoor/indoor)	:	PC13:Fuels--Liquid (subcategories added): Garden Equipment
Room size	:	34 M3
Remarks	:	Unless otherwise stated, covers concentrations up to 100%., Covers use up to 26 days/year., Covers use up to 1 time/on day of use., Assumes that potential dermal contact is limited to inside hands / one hand / palm of hands., For each use event, covers use amounts up to 750g., For each use event, covers exposure up to 0.033 hr/event.

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)

Application Route	:	General measures (skin irritants)
Remarks	:	Ensure there is no direct skin contact with product., Remove accidental skin contamination.
Application Route	:	General measures (flammability)
Remarks	:	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.
Application Route	:	General measures (aspiration hazard)
Remarks	:	Do not ingest. If swallowed then seek immediate medical assistance.
Application Route	:	PC13:Fuels--Liquid - subcategories added: Automotive Refuelling (Diesel)

Remarks	:	No specific RMMs identified beyond those OCs stated
Application Route	:	PC13:Fuels--Liquid -: Home space heater
Remarks	:	No specific RMMs identified beyond those OCs stated
Application Route	:	PC13:Fuels--Liquid (subcategories added): Garden Equipment
Remarks	:	No specific RMMs identified beyond those OCs stated

3. Exposure estimation and reference to its source

3.1. Health:
The ECETOC TRA tool has been used to estimate consumer exposures, consistent with the content of ECETOC report 107 and the Chapter R15 of the IR&CSA TGD. Where exposure determinants differ to these sources, then they are indicated.
3.2. Environment:
The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by 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. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Available hazard data do not enable the derivation of a DNEL for aspiration effects. Risk Management Measures are based on qualitative risk characterisation.
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.
Maximum Risk Characterisation Ratio for Air Emissions RCRair
0,003
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater
0,041