SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance

Trade name : Renewable hydrocarbons (kerosene type fraction)

EC-No. : 931-082-4

REACH registration No : 01-2119850115-46-0008

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

1.2.1. Relevant identified uses

Main use category : Professional use

Use of the substance/mixture : Fuel
Further information: see exposure scenarios attached to this safety data sheet.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier
Kolmar NL B.V.
Claude Debussylaan 10
1082MD Amsterdam - The Netherlands
T +31 20 705 5400 - F +31 20 705 5409
functiontrading@kolmargroup.com -
www.kolmargroup.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 3 H226

Asp. Tox. 1 H304

Full text of H- and EUH-statements: see section 16

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS08

Signal word : Danger
Contains : Renewable hydrocarbons (kerosene type fraction)
Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.
Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P310+P331 - IF SWALLOWED: Immediately call a doctor, a POISON CENTER. Do NOT induce vomiting.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents and container to an approved waste disposal plant.
Extra phrases : EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Other hazards : Vapours can form explosive mixtures with air.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance name : Renewable hydrocarbons (kerosene type fraction)
EC-No. : 931-082-4

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Renewable hydrocarbons (kerosene type fraction)	(EC-No.) 931-082-4 (REACH-no) 01-2119850115-46-0008	100	Flam. Liq. 3, H226 Asp. Tox. 1, H304

Full text of H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice : First aider: Pay attention to self-protection!. Concerning personal protective equipment to use, see section 8. Never give anything by mouth to an unconscious person. In case of doubt or persistent symptoms, consult always a physician. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

Inhalation : Remove casualty to fresh air and keep warm and at rest. In case of doubt or persistent symptoms, consult always a physician.

Skin contact : Remove contaminated clothing and shoes. Gently wash with plenty of soap and water. In case of doubt or persistent symptoms, consult always a physician.

Eyes contact : Rinse immediately carefully and thoroughly with eye-bath or water. In case of doubt or persistent symptoms, consult always a physician.

Ingestion : Rinse mouth thoroughly with water. Do NOT induce vomiting. Get immediate medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation : High concentration of vapours may induce: headache, dizziness, drowsiness, nausea and vomiting.

Skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use.

Eyes contact : Not expected to present a significant eye contact hazard under anticipated conditions of normal use. May be irritating.

Ingestion : May be fatal if swallowed and enters airways. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : carbon dioxide (CO2), powder, alcohol-resistant foam, water spray.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards : Flammable liquid and vapour. Heating will cause a rise in pressure with a risk of bursting.

Explosion hazard : Vapours may form explosive mixture with air. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO2). Burning produces noxious and toxic fumes.

5.3. Advice for firefighters

Firefighting instructions : Evacuate area. Use water spray or fog for cooling exposed containers. Contain the extinguishing fluids by bunding. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.

Other information : Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Evacuate unnecessary personnel. Keep upwind. Provide adequate ventilation. Wear recommended personal protective equipment. Concerning personal protective equipment to use, see section 8. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ensure equipment is adequately earthed. Use explosion-proof equipment. Use only non-sparking tools.

6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Dam up the liquid spill. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Recover large spills by pumping (use an explosion proof or hand pump). Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). This material and its container must be disposed of in a safe way, and as per local legislation. Cover the spilled liquid product with foam to slow down evaporation.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Take any precaution to avoid mixing with Incompatible materials, Refer to Section 10 on Incompatible Materials. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Avoid release to the environment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools.

Hygiene measures : Keep good industrial hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feedingstuffs. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Storage of flammable liquids. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Avoid the build-up of electrostatic charge. Ensure equipment is adequately earthed.

Incompatible substances or mixtures : Oxidizing agent.

Heat and ignition sources : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep out of direct sunlight.

Packaging materials : Keep only in the original container. Do not pierce or burn, even after use. Do not burn, or use a cutting torch on the empty drum. Never use pressure to empty container.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional information : Recommended monitoring procedures :. Personal air monitoring. Room air monitoring

8.2. Exposure controls

Engineering measure(s) : Provide adequate ventilation. Organisational measures to prevent /limit releases, dispersion and exposure. See Section 7 for information on safe handling. Take precautionary measures against static discharges. Ensure equipment is adequately earthed. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc.

Personal protective equipment : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hand protection : Wear chemically resistant gloves (tested to EN374) . Suitable material: The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Eye protection : Use suitable eye protection (EN166): Safety glasses

Body protection : Wear suitable protective clothing. Use chemically protective clothing. Chemical resistant safety shoes

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (DIN EN 140). full face mask (DIN EN 136). Filter type: A+P. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. (EN 137)

Thermal hazard protection : Not required for normal conditions of use. Use dedicated equipment.

Environmental exposure controls : Avoid release to the environment. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: Colourless.
Odour	: Not available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available

Melting / freezing point	:	-43,5 °C (ASTM D2386)
Freezing point	:	No data available
Initial boiling point and boiling range	:	115 – 281,7 °C (ASTM D2887)
Flash point	:	42 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability	:	Not applicable,liquid
Vapour pressure	:	178 Pa (25°C)
Vapour density	:	No data available
Relative density	:	0,75 (20°C)
Solubility	:	Water: < 1 mg/l
Partition coefficient n-octanol/water	:	6,5 (40°C)
Kinematic viscosity	:	1,289 cSt (ASTM D445)
Dynamic viscosity	:	No data available
Explosive properties	:	Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.
Oxidising properties	:	Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.
Explosive limits	:	No data available
Particle size	:	Not applicable
Particle size distribution	:	Not applicable
Particle shape	:	Not applicable
Particle aspect ratio	:	Not applicable
Particle aggregation state	:	Not applicable
Particle agglomeration state	:	Not applicable
Particle specific surface area	:	Not applicable
Particle dustiness	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour. Reference to other sections: 10.4 & 10.5.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixture with air. No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. See Section 7 for information on safe handling.

10.5. Incompatible materials

oxidising substances. See Section 7 for information on safe handling.

10.6. Hazardous decomposition products

Reference to other sections 5.2.

SECTION 11: Toxicological information

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

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: No data available

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: No data available

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : May be fatal if swallowed and enters airways.

Renewable hydrocarbons (kerosene type fraction)	
Kinematic viscosity	1,289 mm²/s (ASTM D445)

Other information : Symptoms related to the physical, chemical and toxicological characteristics. For further information see section 4.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2 Other information

Other information : Symptoms related to the physical, chemical and toxicological characteristics,For further information see section 4

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties : According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

12.2. Persistence and degradability

Renewable hydrocarbons (kerosene type fraction)	
Persistence and degradability	No additional information available.

12.3. Bioaccumulative potential

Renewable hydrocarbons (kerosene type fraction)	
Partition coefficient n-octanol/water	6,5 (40°C)
Bioaccumulative potential	No additional information available.

12.4. Mobility in soil

Renewable hydrocarbons (kerosene type fraction)	
Mobility in soil	No data available

12.5. Results of PBT and vPvB assessment

Renewable hydrocarbons (kerosene type fraction)
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

12.7. Other adverse effects

Other adverse effects : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Avoid release to the environment. Dispose of empty containers and wastes safely. See Section 7 for information on safe handling. Refer to manufacturer/supplier for information on recovery/recycling. Recycling is preferred to disposal or incineration. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations. Handle contaminated packages in the same way as the substance itself. Dispose of contaminated materials in accordance with current regulations. Packaging contaminated by the product : Do not pierce or burn, even after use. Never use pressure to empty container.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : This material and its container must be disposed of as hazardous waste Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1863	1863	1863	1863	1863
14.2. UN proper shipping name				
FUEL, AVIATION, TURBINE ENGINE	FUEL, AVIATION, TURBINE ENGINE	Fuel, aviation, turbine engine	FUEL, AVIATION, TURBINE ENGINE	FUEL, AVIATION, TURBINE ENGINE
Transport document description				
UN 1863 FUEL, AVIATION, TURBINE ENGINE, 3, III, (D/E)	UN 1863 FUEL, AVIATION, TURBINE ENGINE, 3, III	UN 1863 Fuel, aviation, turbine engine, 3, III	UN 1863 FUEL, AVIATION, TURBINE ENGINE, 3, III	UN 1863 FUEL, AVIATION, TURBINE ENGINE, 3, III
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

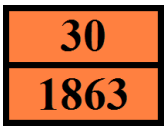
Special precautions for user : No data available

- Overland transport

Classification code (ADR)	:	F1
Special provisions	:	664
Limited quantities (ADR)	:	5l
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	T2
Portable tank and bulk container special provisions (ADR)	:	TP1
Tank code (ADR)	:	LGBF
Vehicle for tank carriage	:	FL
Transport category (ADR)	:	3
Special provisions for carriage - Packages (ADR)	:	V12
Special provisions for carriage - Operation (ADR)	:	S2

Hazard identification number (Kemler No.) : 30

Orange plates :



Tunnel restriction code : D/E

EAC code : 3Y

- Transport by sea

Special provisions (IMDG) : 223

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : P001, LP01

IBC packing instructions (IMDG) : IBC03

Tank instructions (IMDG) : T2

Tank special provisions (IMDG) : TP1

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-E

Stowage category (IMDG) : A

Properties and observations (IMDG) : Immiscible with water.

- Air transport

PCA Excepted quantities (IATA) : E1

PCA Limited quantities (IATA) : Y344

PCA limited quantity max net quantity (IATA) : 10L

PCA packing instructions (IATA) : 355

PCA max net quantity (IATA) : 60L

CAO packing instructions (IATA) : 366

CAO max net quantity (IATA) : 220L

Special provisions (IATA) : A3

ERG code (IATA) : 3L

- Inland waterway transport

Classification code (ADN) : F1

Limited quantities (ADN) : 5 L

Excepted quantities (ADN) : E1

Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EX, A

Ventilation (ADN) : VE01

Number of blue cones/lights (ADN) : 0

- Rail transport

Classification code (RID) : F1

Limited quantities (RID) : 5L

Excepted quantities (RID) : E1

Packing instructions (RID) : P001, IBC03, LP01, R001

Mixed packing provisions (RID) : MP19

Portable tank and bulk container instructions (RID)	: T2
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE4
Hazard identification number (RID)	: 30

14.7. Maritime transport in bulk according to IMO instruments

Code: IBC : No data available.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3(a) 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: 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	Renewable hydrocarbons (kerosene type fraction)
3(b) 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: 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	Renewable hydrocarbons (kerosene type fraction)
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	Renewable hydrocarbons (kerosene type fraction) ; Renewable hydrocarbons (kerosene type fraction)

Renewable hydrocarbons (kerosene type fraction) is not on the REACH Candidate List

Renewable hydrocarbons (kerosene type fraction) is not on the REACH Annex XIV List

15.1.2. National regulations

France

No ICPE	Installations classées Désignation de la rubrique	Code Régime	Rayon
4330.text	Liquides inflammables de catégorie 1, liquides inflammables maintenus à une température supérieure à leur point d'ébullition, autres liquides de point éclair inférieur ou égal à 60° C maintenus à une température supérieure à leur température d'ébullition ou dans des conditions particulières de traitement, telles qu'une pression ou une température élevée (1).		

4330.1	La quantité totale susceptible d'être présente dans les installations y compris dans les cavités souterraines étant : 1. Supérieure ou égale à 10 t (1) Conformément à la section 2.6.4.5 de l'annexe I du règlement (CE) n° 1272/2008, il n'est pas nécessaire de classer les liquides ayant un point d'éclair supérieur à 35° C dans la catégorie 3 si l'épreuve de combustion entretenue du point L 2, partie III, section 32, du Manuel d'épreuves et de critères des Nations unies a donné des résultats négatifs. Toutefois, cette remarque n'est pas valable en cas de température ou de pression élevée, et ces liquides doivent alors être classés dans cette catégorie. Quantité seuil bas au sens de l'article R. 511-10 : 10 t. Quantité seuil haut au sens de l'article R. 511-10 : 50 t.	A	2
4330.2	La quantité totale susceptible d'être présente dans les installations y compris dans les cavités souterraines étant : 2. Supérieure ou égale à 1 t mais inférieure à 10 t (1) Conformément à la section 2.6.4.5 de l'annexe I du règlement (CE) n° 1272/2008, il n'est pas nécessaire de classer les liquides ayant un point d'éclair supérieur à 35° C dans la catégorie 3 si l'épreuve de combustion entretenue du point L 2, partie III, section 32, du Manuel d'épreuves et de critères des Nations unies a donné des résultats négatifs. Toutefois, cette remarque n'est pas valable en cas de température ou de pression élevée, et ces liquides doivent alors être classés dans cette catégorie. Quantité seuil bas au sens de l'article R. 511-10 : 10 t. Quantité seuil haut au sens de l'article R. 511-10 : 50 t.	DC	
4331.text	Liquides inflammables de catégorie 2 ou catégorie 3 à l'exclusion de la rubrique 4330. La quantité totale susceptible d'être présente dans les installations y compris dans les cavités souterraines étant :		
4331.1	1. Supérieure ou égale à 1000 t Quantité seuil bas au sens de l'article R. 511-10 : 5 000 t. Quantité seuil haut au sens de l'article R. 511-10 : 50 000 t.	A	2
4331.2	2. Supérieure ou égale à 100 t mais inférieure à 1000 t Quantité seuil bas au sens de l'article R. 511-10 : 5 000 t. Quantité seuil haut au sens de l'article R. 511-10 : 50 000 t.	E	
4331.3	3. Supérieure ou égale à 50 t mais inférieure à 100 t Quantité seuil bas au sens de l'article R. 511-10 : 5 000 t. Quantité seuil haut au sens de l'article R. 511-10 : 50 000 t.	DC	

Germany

Regulatory reference	: WGK 1, Slightly hazardous to water
Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG) Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

Waterbezwaarlijkheid	: B (4) - Weinig schadelijk voor in het water levende organismen
Saneringsinspanningen	: B - Lozing minimaliseren; toepassen van best uitvoerbare technieken
SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed

SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed

Denmark

Class for fire hazard	: Class II-1
Store unit	: 5 liter
Classification remarks	: R10 <H226;H304>; Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation	: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

	ABM = Algemene beoordelingsmethodiek
	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	BTT = Breakthrough time (maximum wearing time)
	DMEL = Derived Minimal Effect level
	DNEL = Derived No Effect Level
	EC50 = Median Effective Concentration
	EL50 = Median effective level
	ErC50 = EC50 in terms of reduction of growth rate
	ErL50 = EL50 in terms of reduction of growth rate
	EWC = European waste catalogue
	LC50 = Median lethal concentration
	LD50 = Median lethal dose
	LL50 = Median lethal level
	NA = Not applicable
	NOEC = No observed effect concentration
	NOEL: no-observed-effect level
	NOELR = No observed effect loading rate
	NOAEC = No observed adverse effect concentration
	NOAEL = No observed adverse effect level
	N.O.S. = Not Otherwise Specified
	OEL = Occupational Exposure Limits - Short Term Exposure Limits (STELs)
	PNEC = Predicted No Effect Concentration
	Quantitative structure-activity relationship (QSAR)

	STOT = Specific Target Organ Toxicity
	TWA = time weighted average
	VOC = Volatile organic compounds
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

Sources of key data used to compile the datasheet : ECHA (European Chemicals Agency). LOLI. Supplier information. CSR, consortium.

Training advice : Training staff on good practice.

Other information : Assessment/classification CLP. Article 9. Calculation method. Physicochemical hazard assessment: Information given is based on tests on the mixture itself.

Full text of H- and EUH-statements:

Asp. Tox. 1	Aspiration hazard, Category 1
EUH066	Repeated exposure may cause skin dryness or cracking.
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Annex to the safety data sheet

Annex : Identified uses						
Title	**Sector of use**	**Product category**	**Process category**	**Article category**	**Environmental release**	**SPERC**
Use as an intermediate	SU3, SU8, SU9		PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC15		ERC6a	ESVOC SPERC 6.1a.v1
Distribution of substance	SU3		PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15		ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7	ESVOC SPERC 1.1b.v1
Use as a fuel	SU3		PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16		ERC7	ESVOC SPERC 7.12a.v1
Use as a fuel	SU22		PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16		ERC9a, ERC9b	ESVOC SPERC 9.12b.v1

1. Exposure scenario 02

Use as an intermediate

ES Ref.: 02 ES Type: Worker Version: 1	

Use descriptors	PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC15 SU3, SU8, SU9 ERC6a ESVOC SPERC 6.1a.v1
Processes, tasks activities covered	Use of substance as an intermediate (not related to Strictly Controlled Conditions). Includes recycling/ recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container) Use at industrial sites (IS)

2. Operational conditions and risk management measures

2.1 Contributing scenario controlling worker exposure (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC15)

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
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
PROC15	Use as laboratory reagent

Product characteristics

No additional information

Operational conditions

No additional information

Risk management measures

Technical conditions and measures to control dispersion from the source towards the worker		

2.2 Contributing scenario controlling environmental exposure (ERC6a, ESVOC SPERC 6.1a.v1)

ERC6a	Use of intermediate
ESVOC SPERC 6.1a.v1	Manufacture of substances: Industrial (SU8, SU9)

Product characteristics

No additional information

Operational conditions

Amount used	Regional use tonnage (tons/year):	150050
	Fraction of EU tonnage used in region:	0,33
	Fraction of regional tonnage used locally:	1
	Annual site tonnage (tons/year):	150050
	Maximum daily site tonnage (kg/day)	500000
Frequency and duration of use	Continuous use/release.	
	Emission days (days/year):	300
Environmental factors not influenced by risk management	Local freshwater dilution factor:	10
	Local marine water dilution factor:	100
Other given operational conditions affecting environmental exposure	Release fraction to air from process (initial release prior to RMM):	0,001
	Release fraction to wastewater from process	0,00001
	Release fraction to soil from process (initial release prior to RMM):	0,001

Risk management measures

Technical conditions and measures at process level to prevent release	Common practices vary across sites thus conservative process release estimates used.	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Risk from environmental exposure is driven by freshwater secondary poisoning	
	If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.	
	No air emission controls required; required removal efficiency is 0%	
Organizational measures to prevent/limit release from the site	Do not apply industrial sludge to natural soils.	
	Sludge should be incinerated, contained or reclaimed.	
Conditions and measures related to sewage treatment plant	Estimated substance removal from wastewater via domestic sewage treatment (%):	
	Maximum allowable site tonnage (MSafe) based on	1600000

	release following total wastewater treatment removal (kg/d):	
	Assumed municipal sewage treatment plant flow:	2000 m³/d
Conditions and measures related to external treatment of waste for disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations.	
Conditions and measures related to external recovery of waste	External recovery and recycling of waste should comply with applicable local and/or national regulations.	

3. Exposure estimation and reference to its source

3.1. Health

Information for contributing exposure scenario	
2.1	Not applicable

3.2. Environment

Information for contributing exposure scenario	
2.2	Not applicable

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

4.1. Health

Guidance - Health	No data available

4.2. Environment

Guidance - Environment	No data available

1. Exposure scenario 03

Distribution of substance

ES Ref.: 03 ES Type: Worker Version: 1	

Use descriptors	PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15 SU3 ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7 ESVOC SPERC 1.1b.v1
Processes, tasks activities covered	Bulk loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading, maintenance and associated laboratory activities. [GES1A_I] Use at industrial sites (IS)

2. Operational conditions and risk management measures

2.1 Contributing scenario controlling worker exposure (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15)

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
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 preparation into small containers (dedicated filling line, including weighing)
PROC15	Use as laboratory reagent

Product characteristics

No additional information

Operational conditions

Specific operational conditions:

Do not ingest. If swallowed then seek immediate medical assistance.		
If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374 and provide employee skin care programmes.		

Risk management measures

Other risk management measures:

This product is classified as R65 (Harmful: may cause lung damage if swallowed) respectively H304 (May be fatal if swallowed and enters airways). The risk relates to potential for aspiration. The risk arising from aspiration hazard is solely related to the physico-chemical properties of the substance. The risk can therefore be controlled by implementing risk management measures tailored to this specific hazard and included within Chapter 8 of the SDS. This product is classified as R66 / EUH066 (Repeated exposure may cause skin dryness or cracking). The risk relates to the potential for repeated or prolonged dermal contact. The risk arising from contact is solely related to the physico-chemical properties of the		

substance. The risk can therefore be controlled by implementing risk management measures tailored to this specific hazard and included within Chapter 8 of the SDS.		

2.2 Contributing scenario controlling environmental exposure (ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7, ESVOC SPERC 1.1b.v1)

ERC1	Manufacture of the substance
ERC2	Formulation into mixture
ERC3	Formulation into solid matrix
ERC4	Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC5	Use at industrial site leading to inclusion into/onto article
ERC6a	Use of intermediate
ERC6b	Use of reactive processing aid at industrial site (no inclusion into or onto article)
ERC6c	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC6d	Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC7	Use of functional fluid at industrial site
ESVOC SPERC 1.1b.v1	Distribution: Industrial (SU3)

Product characteristics

Physical form	Substance is complex UVCB, Predominantly hydrophobic

Operational conditions

Amount used	Regional use tonnage (tons/year):	152000
	Fraction of EU tonnage used in region:	0,1
	Fraction of regional tonnage used locally:	0,002
	Annual site tonnage (tons/year):	304
	Maximum daily site tonnage (kg/day)	100000
Frequency and duration of use	Continuous use/release.	
	Emission days (days/year):	300
Environmental factors not influenced by risk management	Local freshwater dilution factor:	10
	Local marine water dilution factor:	100
Other given operational conditions affecting environmental exposure	Release fraction to air from process (initial release prior to RMM):	0,001
	Release fraction to wastewater from process	0,0000001
	Release fraction to soil from process (initial release prior to RMM):	0,00001

Risk management measures

Technical conditions and measures at process level to prevent release	Common practices vary across sites thus conservative process release estimates used.	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Risk from environmental exposure is driven by freshwater secondary poisoning	
	If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.	
	No air emission controls required; required removal efficiency is 0%	
Organizational measures to prevent/limit release from the site	Do not apply industrial sludge to natural soils.	
	Sludge should be incinerated, contained or reclaimed.	
Conditions and measures related to sewage treatment plant	Estimated substance removal from wastewater via domestic sewage treatment (%):	
	Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d):	1700000
	Assumed municipal sewage treatment plant flow:	2000 m³/d
Conditions and measures related to external treatment of waste for disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations.	
Conditions and measures related to external recovery of waste	External recovery and recycling of waste should comply with applicable local and/or national	

	regulations.	

3. Exposure estimation and reference to its source

3.1. Health

Information for contributing exposure scenario	
2.1	Not applicable

3.2. Environment

Information for contributing exposure scenario	
2.2	Not applicable

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

4.1. Health

Guidance - Health	No data available

4.2. Environment

Guidance - Environment	No data available

1. Exposure scenario 05

Use as a fuel

ES Ref.: 05 ES Type: Worker Version: 1	

Use descriptors	PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16 SU3 ERC7 ESVOC SPERC 7.12a.v1
Processes, tasks activities covered	Covers the use as a fuel (or fuel additives and additive components) and includes activities associated with its transfer, use, equipment maintenance and handling of waste Use at industrial sites (IS)

2. Operational conditions and risk management measures

2.1 Contributing scenario controlling worker exposure (PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16)

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
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

Product characteristics

Physical form	Liquid
Concentration of the Substance in Mixture/Article	100
Vapour pressure	178 Pa
Viscosity, kinematic	1 cSt

Operational conditions

Specific operational conditions:

Do not ingest. If swallowed then seek immediate medical assistance.		
If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374 and provide employee skin care programmes.		

Risk management measures

Other risk management measures:

This product is classified as R65 (Harmful: may cause lung damage if swallowed) respectively H304 (May be fatal if swallowed and enters airways). The risk relates to potential for aspiration. The risk arising from aspiration hazard is solely related to the physico-chemical properties of the substance. The risk can therefore be controlled by implementing risk management measures tailored to this specific hazard and included within Chapter 8 of the SDS. This product is classified as R66 / EUH066 (Repeated exposure may cause skin dryness or cracking). The risk relates to the potential for repeated or prolonged dermal contact. The risk arising from contact is solely related to the physico-chemical properties of the substance. The risk can therefore be controlled by implementing risk management measures tailored to		

this specific hazard and included within Chapter 8 of the SDS.		

2.2 Contributing scenario controlling environmental exposure (ERC7, ESVOC SPERC 7.12a.v1)

ERC7	Use of functional fluid at industrial site
ESVOC SPERC 7.12a.v1	Use as a fuel: Industrial (SU3)

Product characteristics

Physical form	Substance is complex UVCB, Predominantly hydrophobic

Operational conditions

Amount used	Fraction of EU tonnage used in region:	0,5
	Regional use tonnage (tons/year):	545000
	Fraction of regional tonnage used locally:	0,5
	Annual site tonnage (tons/year):	273000
	Maximum daily site tonnage (kg/day)	908000
Frequency and duration of use	Continuous use/release.	
	Emission days (days/year):	300
Environmental factors not influenced by risk management	Local freshwater dilution factor:	10
	Local marine water dilution factor:	100
Other given operational conditions affecting environmental exposure	Release fraction to air from process (initial release prior to RMM):	0,005
	Release fraction to wastewater from process	0,00001
	Release fraction to soil from process (initial release prior to RMM):	0

Risk management measures

Technical conditions and measures at process level to prevent release	Common practices vary across sites thus conservative process release estimates used.	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Risk from environmental exposure is driven by freshwater secondary poisoning	
	If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.	
	No air emission controls required; required removal efficiency is 0%	
Conditions and measures related to sewage treatment plant	Estimated substance removal from wastewater via domestic sewage treatment (%):	
	Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d):	3600000
	Assumed municipal sewage treatment plant flow:	200 m³/d
Conditions and measures related to external treatment of waste for disposal	Combustion emissions limited by required exhaust emission controls.	
Conditions and measures related to external recovery of waste	External recovery and recycling of waste should comply with applicable local and/or national regulations.	

3. Exposure estimation and reference to its source

3.1. Health

Information for contributing exposure scenario	
2.1	Not applicable

3.2. Environment

Information for contributing exposure scenario	
2.2	Not applicable

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

4.1. Health

Guidance - Health	No data available

4.2. Environment

Guidance - Environment	No data available

1. Exposure scenario 06

Use as a fuel

ES Ref.: 06 ES Type: Worker Version: 1	

Use descriptors	PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16 SU22 ERC9a, ERC9b ESVOC SPERC 9.12b.v1
Processes, tasks activities covered	Widespread use by professional workers (PW)

2. Operational conditions and risk management measures

2.1 Contributing scenario controlling worker exposure (PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16)

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
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

Product characteristics

Physical form	Liquid

Operational conditions

Specific operational conditions:

Do not ingest. If swallowed then seek immediate medical assistance.		
If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374 and provide employee skin care programmes.		

Risk management measures

Other risk management measures:

This product is classified as R65 (Harmful: may cause lung damage if swallowed) respectively H304 (May be fatal if swallowed and enters airways). The risk relates to potential for aspiration. The risk arising from aspiration hazard is solely related to the physico-chemical properties of the substance. The risk can therefore be controlled by implementing risk management measures tailored to this specific hazard and included within Chapter 8 of the SDS. This product is classified as R66 / EUH066 (Repeated exposure may cause skin dryness or cracking). The risk relates to the potential for repeated or prolonged dermal contact. The risk arising from contact is solely related to the physico-chemical properties of the substance. The risk can therefore be controlled by implementing risk management measures tailored to this specific hazard and included within Chapter 8 of the SDS.		

2.2 Contributing scenario controlling environmental exposure (ERC9a, ERC9b, ESVOC SPERC 9.12b.v1)

ERC9a	Widespread use of functional fluid (indoor)
ERC9b	Widespread use of functional fluid (outdoor)

ESVOC SPERC 9.12b.v1	Use as a fuel: Professional (SU22)

Product characteristics

Physical form	Liquid
Concentration of the Substance in Mixture/Article	100
Vapour pressure	1,5 Pa
Viscosity, kinematic	3 mm²/s

Operational conditions

Amount used	Regional use tonnage (tons/year):	52500
	Fraction of EU tonnage used in region:	0,5
	Fraction of regional tonnage used locally:	0,02
	Annual site tonnage (tons/year):	1050
	Maximum daily site tonnage (kg/day)	2880
Frequency and duration of use	Continuous use/release.	
	Emission days (days/year):	365
Environmental factors not influenced by risk management	Local freshwater dilution factor:	10
	Local marine water dilution factor:	100
Other given operational conditions affecting environmental exposure	Release fraction to air from process (initial release prior to RMM):	0,0001
	Release fraction to wastewater from process	0,00001
	Release fraction to soil from process (initial release prior to RMM):	0,00001

Risk management measures

Technical conditions and measures at process level to prevent release	Common practices vary across sites thus conservative process release estimates used.	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Risk from environmental exposure is driven by freshwater secondary poisoning	
	No air emission controls required; required removal efficiency is 0%	
Conditions and measures related to sewage treatment plant	Estimated substance removal from wastewater via domestic sewage treatment (%):	
	Assumed municipal sewage treatment plant flow:	2000 m³/d
Conditions and measures related to external treatment of waste for disposal	Combustion emissions limited by required exhaust emission controls.	
Conditions and measures related to external recovery of waste	External recovery and recycling of waste should comply with applicable local and/or national regulations.	

3. Exposure estimation and reference to its source

3.1. Health

Information for contributing exposure scenario	
2.1	Not applicable

3.2. Environment

Information for contributing exposure scenario	
2.2	Not applicable

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

4.1. Health

Guidance - Health	No data available

4.2. Environment

Guidance - Environment	No data available