

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006**ODOURLESS KEROSENE**

Version 9.0

Print Date 2023/08/15

Revision date / valid from 2023/08/15

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Trade name : ODOURLESS KEROSENE
Substance name : Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics
EC-No. : 926-141-6
EU REACH-Reg. No. : 01-2119456620-43-xxxx

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

Use of the Substance/Mixture : Identified use: See table in front of appendix for a complete overview of identified uses.
Uses advised against : At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company : Brenntag Chemicals Distribution (Ireland) Limited
Unit 405, Grants Drive, Greenogue Business Park
IE DUBLIN 24 Rathcoole
Telephone : 00 353 (0)1 4013500
Telefax : 00 353 (0)1 4013501
E-mail address : msds@brenntag.ie

1.4. Emergency telephone number

Emergency telephone number : EMERGENCY ONLY TELEPHONE NUMBER:
00 32 (0) 3 575 55 55 (SGS Emergency Response Services - 24 hours)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation S.I. 2019/720 (GB CLP)****Regulation S.I. 2019/720 (GB CLP)**

Hazard class	Hazard category	Target Organs	Hazard statements
Aspiration hazard	Category 1	---	H304

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For the full text of the H-Statements mentioned in this Section, see Section 16.

Most important adverse effects

Human Health	:	See section 11 for toxicological information.
Physical and chemical hazards	:	See section 9/10 for physicochemical information.
Potential environmental effects	:	See section 12 for environmental information.

2.2. Label elements

Labelling according to Regulation S.I. 2019/720 (GB CLP)

Hazard symbols	:	
Signal word	:	Danger
Hazard statements	:	H304 May be fatal if swallowed and enters airways.
Precautionary statements	:	
Response	:	P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P331 Do NOT induce vomiting.
Storage	:	P405 Store locked up.
Disposal	:	P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labelling:

EUH066 Repeated exposure may cause skin dryness or cracking.

Hazardous components which must be listed on the label:

|| • Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

2.3. Other hazards

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This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB). This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical nature : Unknown or Variable Composition Complex Reaction Products (UVCB)

		Classification (Regulation S.I. 2019/720 (GB CLP))	
Hazardous components	Amount [%]	Hazard class / Hazard category	Hazard statements
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics			
EC-No. : 926-141-6	100	Asp. Tox.1	H304
EU REACH- : 01-2119456620-43-xxxx			EUH066
Reg. No.			

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice : Take off all contaminated clothing immediately. Wash contaminated clothing before re-use.

If inhaled : In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. If unconscious, place in recovery position and seek medical advice.

In case of skin contact : Wash off immediately with soap and plenty of water. Remove contaminated clothing and shoes. If skin irritation persists, call a physician.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes. If eye irritation persists, consult a

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specialist.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.

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

Symptoms : See Section 11 for more detailed information on health effects and symptoms.

Effects : May be fatal if swallowed and enters airways. Repeated exposure may cause skin dryness or cracking. See Section 11 for more detailed information on health effects and symptoms.

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

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, foam, dry powder or CO₂.

Unsuitable extinguishing media : High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Hazardous decomposition products, Combustible material.

Hazardous combustion products : Carbon oxides, Smoke, Fumes

5.3. Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit)

Further advice : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Keep

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people away from and upwind of spill/leak.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Ensure adequate ventilation. Dike area of spill to prevent spreading and pump liquid to salvage tank. Keep in suitable, closed containers for disposal.

Further information : Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. Keep container tightly closed. Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately. Wash contaminated clothing before re-use.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Take precautionary measures against static discharges. Keep away from heat and sources of ignition.

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Advice on protection against fire and explosion	: Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Ensure all equipment is electrically grounded before beginning transfer operations. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive(>,<) static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature(>,<) presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.
Further information on storage conditions	: Keep tightly closed in a dry and cool place. Keep in a well-ventilated place.
Advice on common storage	: Keep away from food, drink and animal feedingstuffs. Incompatible with oxidizing agents.
Other data	: Stable at normal ambient temperature and pressure.
Suitable packaging materials	: Carbon steel, Stainless steel, Polyester, polyethylene containers, polypropylene, Teflon
Unsuitable packaging materials	: , natural rubber, Butyl rubber, Ethylene-propylene-diene monomer (EPDM), polystyrene

7.3. Specific end use(s)

Specific use(s) : No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Component:	Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics
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Other Occupational Exposure Limit Values

Time Weighted Average (TWA):, Vapor., as total hydrocarbons
165 ppm, 1,200 mg/m³
Calculation according RCP-Method (TRGS 900).
Recommended by ExxonMobil

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8.2. Exposure controls

Appropriate engineering controls

Control measures to consider: Adequate ventilation should be provided so that exposure limits are not exceeded.

Use only explosion-proof equipment.

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment

Respiratory protection

Advice : In case of insufficient ventilation, wear suitable respiratory equipment.
Respiratory protection complying with EN 141.

Filter Type : Type A

Hand protection

Advice : Protective gloves complying with EN 374.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Protective gloves should be replaced at first signs of wear.

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : > 0.38 mm

Eye protection

Advice : Tightly fitting safety goggles

Skin and body protection

Advice : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Wear appropriate chemical resistant clothing and boots.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

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Form	:	clear, liquid
Physical state	:	liquid
Colour	:	colourless
Odour	:	slight
Odour Threshold	:	No data available
Pour point	:	< -48 °C Method: ASTM D5950
Boiling point/boiling range	:	203 - 238 °C Method: ASTM D 86
Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	6.0 %(V) (calculated)
Lower explosion limit / Lower flammability limit	:	0.6 %(V) (calculated)
Flash point	:	> 70 °C Method: ASTM D 93
Auto-ignition temperature	:	227 °C Method: ASTM E 659
Decomposition temperature	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	No data available
pH	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	1.7 mm ² /s (40 °C) 2.3 mm ² /s (20 °C)
Flow time	:	No data available
Solubility(ies)		
Water solubility	:	negligible
Solubility in other solvents	:	No data available
Dissolution Rate	:	No data available

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Partition coefficient: n-octanol/water	: log Pow: > 4
Dispersion Stability	: No data available
Vapour pressure	: 0.02 kPa (20 °C) Method: (calculated)
Relative density	: 0.8 (15 °C) Reference substance: Water Method: (calculated)
Density	: 800 kg/m ³ (15 °C) Method: ISO 12185
Bulk density	: No data available
Relative vapour density	: > 1 (1010 hPa) Method: estimated (Air = 1.0)
Particle characteristics	No data available

9.2 Other information

Molecular weight	: 177 g/mol Method: (calculated)
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SECTION 10: Stability and reactivity

10.1. Reactivity

Advice	: No decomposition if stored and applied as directed.
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10.2. Chemical stability

Advice	: Stable under recommended storage conditions.
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10.3. Possibility of hazardous reactions

Hazardous reactions	: Hazardous polymerisation does not occur.
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10.4. Conditions to avoid

Conditions to avoid	: Keep away from heat and sources of ignition. Heat, flames and sparks. Take precautionary measures against static discharges.
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10.5. Incompatible materials

Materials to avoid	: Strong oxidising agents
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10.6. Hazardous decomposition products

Hazardous decomposition products	: Material does not decompose at ambient temperatures.
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SECTION 11: Toxicological information

11.1. Information on the hazard classes within the meaning of Regulation (EC) No. 1272/2008

Data for the product	
Acute toxicity	
Oral	
LD50	: > 5000 mg/kg (Rat) (OECD Test Guideline 401)
Inhalation	
LC50	: > 20 mg/l (Rat; 8 h; vapour) (OECD Test Guideline 403)
Dermal	
LD50	: > 5000 mg/kg (Rabbit) (OECD Test Guideline 402)
Irritation	
Skin	
Result	: (OECD Test Guideline 404)Prolonged skin contact may defat the skin and produce dermatitis.
Eyes	
Result	: Mild eye irritation (OECD Test Guideline 405)Direct contact with eyes may cause temporary irritation.
Sensitisation	
Result	: Not expected to be a respiratory sensitizer. (OECD Test Guideline 406)Not believed to be sensitizing to skin.
CMR effects	
CMR Properties	
Mutagenicity	: Did not show mutagenic effects on germ cells
Teratogenicity	: It is not considered teratogenic.
Reproductive toxicity	: Not expected to impair fertility.
Carcinogenicity	
(OECD Test Guideline 453)Not expected to be carcinogenic.	
Specific Target Organ Toxicity	
Single exposure	
Remarks	: The substance or mixture is not classified as specific target organ toxicant, single exposure.

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Repeated exposure

Remarks : Not expected to cause organ damage from prolonged or repeated exposure.

Other toxic properties

Repeated dose toxicity

; Health injuries are not known or expected under normal use.

Aspiration hazard

May be fatal if swallowed and enters airways.,

Component: Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

Acute toxicity

Oral

LD50 : > 5000 mg/kg (Rat)

Inhalation

LC50 : > 20 mg/l (Rat; 4 h)

Dermal

LD50 : > 5000 mg/kg (Rat)

Irritation

Skin

Result : Mild skin irritation

Eyes

Result : No eye irritation

Sensitisation

Result : not sensitizing

CMR effects

CMR Properties

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Carcinogenicity : It is not considered carcinogenic.
 Mutagenicity : It is not considered mutagenic.
 Teratogenicity : It is not considered teratogenic.
 Reproductive toxicity : It is not considered toxic for reproduction.

Specific Target Organ Toxicity

Single exposure

Remarks : No data available

Repeated exposure

Skin contact : Degreases the skin which may cause dry and rough. Prolonged or repeated skin contact may result in dermatitis.

Other toxic properties

Aspiration hazard

May be fatal if swallowed and enters airways.,

11.2. Information on other hazards

Data for the product

Endocrine disrupting properties

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1. Toxicity

Data for the product

Acute toxicity

Fish

LL0 : 1,000 mg/l (Oncorhynchus mykiss; 96 h)

Toxicity to daphnia and other aquatic invertebrates

ELO : 1,000 mg/l (Daphnia magna; 48 h)

algae

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EL0 : 1000 mg/l (Pseudokirchneriella subcapitata (microalgae); 72 h)

Short-term (acute) aquatic hazard

Result : Not expected to be harmful to aquatic organisms.

Chronic toxicity

Long-term (chronic) aquatic hazard

Result : Not expected to demonstrate chronic toxicity to aquatic organisms.

Component: Hydrocarbons, C11-C14, n-alkanes,
isoalkanes, cyclics, <2% aromatics

Acute toxicity

Fish

: This product has no known ecotoxicological effects.

Toxicity to daphnia and other aquatic invertebrates

: This product has no known ecotoxicological effects.

algae

: This product has no known ecotoxicological effects.

12.2. Persistence and degradability

Data for the product

Persistence and degradability

Biodegradability

Result : 69 % (Exposure Time: 28 d) Readily biodegradable.

Component: Hydrocarbons, C11-C14, n-alkanes,
isoalkanes, cyclics, <2% aromatics

Persistence and degradability

Persistence

Result : Oxidises rapidly by photo-chemical reactions in air.

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Biodegradability

Result : Readily biodegradable.

12.3. Bioaccumulative potential

Data for the product

Bioaccumulation

Result : not determined

Component: Hydrocarbons, C11-C14, n-alkanes,
isoalkanes, cyclics, <2% aromatics

Bioaccumulation

Result : log Kow 6 - 8.2
: Bioaccumulation is expected.

12.4. Mobility in soil

Data for the product

Mobility

Result : No data available

Component: Hydrocarbons, C11-C14, n-alkanes,
isoalkanes, cyclics, <2% aromatics

Mobility

Water : The product is insoluble and floats on water.
Soil : Adsorption to solid soil phase can be expected.

12.5. Results of PBT and vPvB assessment

Data for the product

Results of PBT and vPvB assessment

Result : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Result : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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Component:	Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics
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Results of PBT and vPvB assessment

Result : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6. Endocrine disrupting properties

Data for the product

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

Data for the product

Additional ecological information

Result : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

Contaminated packaging : Dispose of contaminated packaging in the same way as the product. In accordance with local and national regulations.

European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION 14: Transport information

Not dangerous goods for ADR, RID, IMDG and IATA.

14.1. UN number or ID number

Not applicable.

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14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packaging group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Component:	Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics
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EU. Directive : ; The substance/mixture does not fall under this legislation.
2012/18/EU (SEVESO
III) on major accident
hazards involving
dangerous substances,
Annex I

15.2. Chemical safety assessment

No data available

SECTION 16: Other information

II

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

H304 May be fatal if swallowed and enters airways.

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Abbreviations and Acronyms

AU AIICL	Australia. Industrial Chemicals Act (AIIC) List
BCF	bioconcentration factor
BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level
DSL	Canada. Environmental Protection Act, Domestic Substances List
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ENCS (JP)	Japan. Kashin-Hou Law List
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IECSC	China. Inventory of Existing Chemical Substances
INSQ	Mexico. National Inventory of Chemical Substances
ISHL (JP)	Japan. Inventory of Industrial Safety & Health
KECI (KR)	Korea. Existing Chemicals Inventory
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level
LOEL	lowest observed effect level
NDSL	Canada. Environmental Protection Act. Non-Domestic Substances List
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
NZIOC	New Zealand. Inventory of Chemicals
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit
ONT INV	Canada. Ontario Inventory List
PBT	persistent, bioaccumulative and toxic
PHARM (JP)	Japan. Pharmacopoeia Listing
PICCS (PH)	Philippines. Inventory of Chemicals and Chemical Substances
PNEC	predicted no-effect concentration
REACH Auth. No.:	REACH Authorisation Number
REACH AuthAppC. No.	REACH Authorisation Application Consultation Number

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UK REACH Auth. No.:	UK REACH Authorisation Number
UK REACH AuthAppC. No.	UK REACH Authorisation Application Consultation Number
UK REACH-Reg.No	UK REACH Registration Number
STOT	specific target organ toxicity
SVHC	substance of very high concern
TCSI	Taiwan. Existing Chemicals Inventory
TH INV	Thailand. Existing Chemicals Inventory from FDA
TSCA	US. Toxic Substances Control Act
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
VN INVL	Vietnam. National Chemical Inventory
vPvB	very persistent and very bioaccumulative

Further information

Key literature references and sources for data	:	Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.
Methods used for product classification	:	The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.
Hints for trainings	:	The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.
Other information	:	The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

|| Indicates updated section.

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No.	Short title	REACH Auth. No.:/ REACH AuthAppC. No.	Main User Group (SU)	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environmental Release Category (ERC)	Article Category (AC)	Specified
1	Manufacture of substance	NA NA	3	8, 9	NA	1, 2, 3, 4, 8a, 8b, 15	1, 4	NA	ES17122
2	Distribution of substance	NA NA	3	8, 9	NA	1, 2, 3, 4, 8a, 8b, 9, 15	1, 2, 3, 4, 5, 6a, 6b, 6c, 6d, 7	NA	ES17130
3	Formulation & (re)packing of substances and mixtures	NA NA	3	NA	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15	2	NA	ES17137
4	Use in rubber production and processing	NA NA	3	8, 9, 11, 12, 13	NA	1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 13, 14, 15, 21	1, 4, 6d, 7	NA	ES17155
5	Use in polymer processing	NA NA	3	NA	NA	1, 2, 3, 4, 5, 6, 8a, 8b, 9, 13, 14, 21	4	NA	ES17157
6	Use in polymer processing	NA NA	22	NA	NA	1, 2, 6, 8a, 8b, 14, 21	8a, 8d	NA	ES17192
7	Use in coatings	NA NA	3	NA	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 14, 15	4	NA	ES17139
8	Use in coatings	NA NA	21	NA	1, 4, 8, 9a, 9b, 9c, 15, 18, 23, 24, 31, 34	NA	8a, 8d	NA	ES17202
9	Use in coatings	NA NA	22	NA	NA	1, 2, 3, 4, 5, 8a, 8b, 10, 11, 13, 15, 19	8a, 8d	NA	ES17172
10	Use in cleaning agents	NA NA	3	NA	NA	1, 2, 3, 4, 7, 8a, 8b, 10, 13	4	NA	ES17141
11	Use in cleaning agents	NA NA	21	NA	3, 4, 8, 9a, 9b, 9c, 24, 35, 38	NA	8a, 8d	NA	ES17207
12	Use in cleaning agents	NA NA	22	NA	NA	1, 2, 3, 4, 8a, 8b, 10, 11, 13, 19	8a, 8d	NA	ES17174

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13	Use in binder and release agents	NA NA	3	NA	NA	1, 2, 3, 4, 6, 7, 8a, 8b, 10, 13, 14	4	NA	ES17149
14	Use in binder and release agents	NA NA	22	NA	NA	1, 2, 3, 4, 6, 8a, 8b, 10, 11, 14	8a, 8d	NA	ES17180
15	Use in agrochemicals	NA NA	21	NA	12, 27	NA	8a, 8d	NA	ES17211
16	Use in fuel	NA NA	3	NA	NA	1, 2, 3, 8a, 8b, 16	7	NA	ES17151
17	Use in fuel	NA NA	21	NA	13	NA	9a, 9b	NA	ES17213
18	Use in fuel	NA NA	22	NA	NA	1, 2, 3, 8a, 8b, 16	9a, 9b	NA	ES17296
19	Use as lubricants	NA NA	3	NA	NA	1, 2, 3, 4, 7, 8a, 8b, 9, 10, 13, 17, 18	4, 7	NA	ES17143
20	Use as lubricants	NA NA	21	NA	1, 24, 31	NA	8a, 8d, 9a, 9b	NA	ES17209
21	Use as lubricants	NA NA	22	NA	NA	1, 2, 3, 4, 8a, 8b, 9, 10, 11, 13, 17, 18, 20	8a, 8d, 9a, 9b	NA	ES17176
22	Use in laboratories	NA NA	3	NA	NA	10, 15	2, 4	NA	ES17153
23	Use in laboratories	NA NA	22	NA	NA	10, 15	8a, 9a	NA	ES17188
24	Use in de-icing and anti-icing applications	NA NA	22	NA	NA	1, 2, 8a, 8b, 11	8a, 8d	NA	ES17184
25	Use in explosives	NA NA	22	NA	NA	1, 2, 3, 5, 8a, 8b	8e	NA	ES17190

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26	Other consumer uses	NA NA	21	NA	28, 39	NA	8a, 8d	NA	ES17217
27	Use in metal working fluids / rolling oils	NA NA	3	NA	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 17	4	NA	ES17145
28	Use in metal working fluids / rolling oils	NA NA	22	NA	NA	1, 2, 3, 5, 8a, 8b, 9, 10, 11, 13, 17	8a, 8d	NA	ES17178
29	Use as Functional Fluids	NA NA	3	NA	NA	1, 2, 3, 4, 8a, 8b, 9	7	NA	ES17164
30	Use as Functional Fluids	NA NA	21	NA	16, 17	NA	9a, 9b	NA	ES17215
31	Use as Functional Fluids	NA NA	22	NA	NA	1, 2, 3, 8a, 9, 20	9a, 9b	NA	ES17182
32	Use in road and construction applications	NA NA	22	NA	NA	1, 2, 8a, 8b, 9, 10, 11, 13	8d, 8f	NA	ES17186
33	Use as water treatment chemicals	NA NA	3	NA	NA	1, 2, 3, 4, 8a, 8b, 13	3, 4	NA	ES17159
34	Use as water treatment chemicals	NA NA	22	NA	NA	1, 2, 3, 4, 8a, 8b, 13	8f	NA	ES17200

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1. Short title of Exposure Scenario 1: Manufacture of substance

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	SU8: Manufacture of bulk, large scale chemicals (including petroleum products) SU9: Manufacture of fine chemicals
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC15: Use as laboratory reagent
Environmental Release Categories	ERC1: Manufacture of substances ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Activity	Manufacture of the substance or use as a process chemical or extraction agent. Includes recycling/ recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling and associated laboratory activities.

2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC15

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

ODOURLESS KEROSENE**Exposure Scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 2: Distribution of substance

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	SU8: Manufacture of bulk, large scale chemicals (including petroleum products) SU9: Manufacture of fine chemicals
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15: Use as laboratory reagent
Environmental Release Categories	ERC1: Manufacture of substances ERC2: Formulation of preparations ERC3: Formulation in materials ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC5: Industrial use resulting in inclusion into or onto a matrix ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC6b: Industrial use of reactive processing aids ERC6c: Industrial use of monomers for manufacture of thermoplastics ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC7: Industrial use of substances in closed systems
Activity	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 distribution and associated laboratory activities.

2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be	

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implemented to control the aspiration hazard
Do not ingest.
If swallowed then seek immediate medical attention
Do NOT induce vomiting.
A DNEL cannot be derived

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 3: Formulation & (re)packing of substances and mixtures

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent
Environmental Release Categories	ERC2: Formulation of preparations
Activity	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

2.1 Contributing scenario controlling environmental exposure for: ERC2

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

ODOURLESS KEROSENE

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 4: Use in rubber production and processing

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	SU8: Manufacture of bulk, large scale chemicals (including petroleum products) SU9: Manufacture of fine chemicals SU11: Manufacture of rubber products SU12: Manufacture of plastics products, including compounding and conversion SU13: Manufacture of other non-metallic mineral products, e.g. plasters, cement
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent PROC21: Low energy manipulation of substances bound in materials and/ or articles
Environmental Release Categories	ERC1: Manufacture of substances ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC7: Industrial use of substances in closed systems
Activity	Manufacture of tyres and general rubber articles, including processing of raw (uncured) rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing.

2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC4, ERC6d, ERC7

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC13, PROC14, PROC15, PROC21

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is	

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vomited following ingestion
 Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures
 For substances classified as H304, the following measures need to be implemented to control the aspiration hazard
 Do not ingest.
 If swallowed then seek immediate medical attention
 Do NOT induce vomiting.
 A DNEL cannot be derived

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.
 Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

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1. Short title of Exposure Scenario 5: Use in polymer processing

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC21: Low energy manipulation of substances bound in materials and/ or articles
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Activity	Processing of formulated polymers including material transfers, additives handling (e.g. pigments, stabilisers, fillers, plasticisers, etc.), moulding, curing and forming activities, material re-works, storage and associated maintenance

2.1 Contributing scenario controlling environmental exposure for: ERC4

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC13, PROC14, PROC21

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

ODOURLESS KEROSENE**Workers**

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

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1. Short title of Exposure Scenario 6: Use in polymer processing

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC21: Low energy manipulation of substances bound in materials and/ or articles
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC6, PROC8a, PROC8b, PROC14, PROC21

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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Available hazard data do not support the need for a DNEL to be established for other health effects.
Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 7: Use in coatings

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC15: Use as laboratory reagent
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Activity	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.

2.1 Contributing scenario controlling environmental exposure for: ERC4

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

ODOURLESS KEROSENE**3. Exposure estimation and reference to its source****Workers**

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 8: Use in coatings

Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)
Chemical product category	PC1: Adhesives, sealants PC4: Anti-Freeze and de-icing products PC8: Biocidal products (e.g. Disinfectants, pest control) PC9a: Coatings and paints, thinners, paint removers PC9b: Fillers, putties, plasters, modelling clay PC9c: Finger paints PC15: Non-metal-surface treatment products PC18: Ink and toners PC23: Leather treatment products PC24: Lubricants, greases, release products PC31: Polishes and wax blends PC34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling consumer exposure for: PC1, PC4, PC8, PC9a, PC9b, PC9c, PC15, PC18, PC23, PC24, PC31, PC34,

Product characteristics	Physical Form (at time of use)	liquid
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do NOT induce vomiting. If swallowed then seek immediate medical attention Keep lamps filled with this liquid out of the reach of children.

3. Exposure estimation and reference to its source

Consumers

Qualitative approach used to conclude safe use.

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

ODOURLESS KEROSENE

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.
Risk management measures are based on qualitative risk characterisation.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 9: Use in coatings

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC15: Use as laboratory reagent PROC19: Hand-mixing with intimate contact and only PPE available
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

ODOURLESS KEROSENE

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

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1. Short title of Exposure Scenario 10: Use in cleaning agents

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Activity	Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

2.1 Contributing scenario controlling environmental exposure for: ERC4

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13

Activity	Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).	
Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

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Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 11: Use in cleaning agents

Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)
Chemical product category	PC3: Air care products PC4: Anti-Freeze and de-icing products PC8: Biocidal products (e.g. Disinfectants, pest control) PC9a: Coatings and paints, thinners, paint removers PC9b: Fillers, putties, plasters, modelling clay PC9c: Finger paints PC24: Lubricants, greases, release products PC35: Washing and cleaning products PC38: Welding and soldering products (with flux coatings or flux cores.), flux products
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products.

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling consumer exposure for: PC3, PC4, PC8, PC9a, PC9b, PC9c, PC24, PC35, PC38

Product characteristics	Physical Form (at time of use)	liquid
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. Keep lamps filled with this liquid out of the reach of children.

3. Exposure estimation and reference to its source

Consumers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to

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at least equivalent levels.

Available hazard data do not support the need for a DNEL to be established for other health effects.

Risk management measures are based on qualitative risk characterisation.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 12: Use in cleaning agents

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC19

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

ODOURLESS KEROSENE**Exposure Scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.
Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 13: Use in binder and release agents

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC6: Calendering operations PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Activity	Covers the use as binders and release agents including material transfers, mixing, application (including spraying and brushing), mould forming and casting, and handling of waste.

2.1 Contributing scenario controlling environmental exposure for: ERC4

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC6, PROC7, PROC8a, PROC8b, PROC10, PROC13, PROC14

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

ODOURLESS KEROSENE**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 14: Use in binder and release agents

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC6: Calendering operations PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC10: Roller application or brushing PROC11: Non industrial spraying PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletisation
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Covers the use as binders and release agents including material transfers, mixing, application by spraying, brushing, and handling of waste.

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC6, PROC8a, PROC8b, PROC10, PROC11, PROC14

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

ODOURLESS KEROSENE

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 15: Use in agrochemicals

Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)
Chemical product category	PC12: Fertilizers PC27: Plant protection products
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Covers the consumer use in agrochemicals in liquid and solid forms.

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling consumer exposure for: PC12, PC27

Product characteristics	Physical Form (at time of use)	liquid
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. Keep lamps filled with this liquid out of the reach of children.

3. Exposure estimation and reference to its source

Consumers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 16: Use in fuel

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure 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 preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC16: Using material as fuel sources, limited exposure to unburned product to be expected
Environmental Release Categories	ERC7: Industrial use of substances in closed systems
Activity	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

2.1 Contributing scenario controlling environmental exposure for: ERC7

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

ODOURLESS KEROSENE

Available hazard data do not support the need for a DNEL to be established for other health effects.
Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 17: Use in fuel

Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)
Chemical product category	PC13: Fuels
Environmental Release Categories	ERC9a: Wide dispersive indoor use of substances in closed systems ERC9b: Wide dispersive outdoor use of substances in closed systems
Activity	Covers consumer uses of automotive fuels only.

2.1 Contributing scenario controlling environmental exposure for: ERC9a, ERC9b

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling consumer exposure for: PC13

Product characteristics	Physical Form (at time of use)	liquid
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. Keep lamps filled with this liquid out of the reach of children.

3. Exposure estimation and reference to its source

Consumers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 18: Use in fuel

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure 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 preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC16: Using material as fuel sources, limited exposure to unburned product to be expected
Environmental Release Categories	ERC9a: Wide dispersive indoor use of substances in closed systems ERC9b: Wide dispersive outdoor use of substances in closed systems
Activity	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

2.1 Contributing scenario controlling environmental exposure for: ERC9a, ERC9b

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

ODOURLESS KEROSENE

Available hazard data do not support the need for a DNEL to be established for other health effects.
Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 19: Use as lubricants

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC17: Lubrication at high energy conditions and in partly open process PROC18: Greasing at high energy conditions
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles ERC7: Industrial use of substances in closed systems
Activity	Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.

2.1 Contributing scenario controlling environmental exposure for: ERC4, ERC7

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, PROC18

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

ODOURLESS KEROSENE

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 20: Use as lubricants

Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)
Chemical product category	PC1: Adhesives, sealants PC24: Lubricants, greases, release products PC31: Polishes and wax blends
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC9a: Wide dispersive indoor use of substances in closed systems ERC9b: Wide dispersive outdoor use of substances in closed systems
Activity	Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil.

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d, ERC9a, ERC9b

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling consumer exposure for: PC1, PC24, PC31

Product characteristics	Physical Form (at time of use)	liquid
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. Keep lamps filled with this liquid out of the reach of children.

3. Exposure estimation and reference to its source

Consumers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 21: Use as lubricants

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC17: Lubrication at high energy conditions and in partly open process PROC18: Greasing at high energy conditions PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC9a: Wide dispersive indoor use of substances in closed systems ERC9b: Wide dispersive outdoor use of substances in closed systems
Activity	Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil.

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d, ERC9a, ERC9b

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC2, PROC1, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18, PROC20

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

ODOURLESS KEROSENE**Workers**

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 22: Use in laboratories

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC10: Roller application or brushing PROC15: Use as laboratory reagent
Environmental Release Categories	ERC2: Formulation of preparations ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Activity	Use of the substance within laboratory settings, including material transfers and equipment cleaning

2.1 Contributing scenario controlling environmental exposure for: ERC2, ERC4

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC10, PROC15

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 23: Use in laboratories

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC10: Roller application or brushing PROC15: Use as laboratory reagent
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC9a: Wide dispersive indoor use of substances in closed systems
Activity	Use of small quantities within laboratory settings, including material transfers and equipment cleaning

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC9a

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC10, PROC15

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 24: Use in de-icing and anti-icing applications

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC11: Non industrial spraying
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Ice prevention and de-icing of vehicles, aircraft and other equipment by spraying

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC8a, PROC8b, PROC11

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 25: Use in explosives

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
Environmental Release Categories	ERC8e: Wide dispersive outdoor use of reactive substances in open systems
Activity	Covers exposures arising from the manufacture and use of slurry explosives (including materials transfer, mixing and charging) and equipment cleaning.

2.1 Contributing scenario controlling environmental exposure for: ERC8e

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

ODOURLESS KEROSENE

Available hazard data do not support the need for a DNEL to be established for other health effects.
Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 26: Other consumer uses

Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)
Chemical product category	PC28: Perfumes, fragrances PC39: Cosmetics, personal care products
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Consumer uses e.g. as a carrier in cosmetics/personal care products, perfumes and fragrances. Note: For cosmetic and personal care products, risk assessment only required for the environment under REACH as human health is covered by alternative legislation, Note: this Exposure Scenario is only relevant for an appropriated use according to the quality grade of the substance delivered

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling consumer exposure for: PC28, PC39

Product characteristics	Physical Form (at time of use)	liquid
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. Keep lamps filled with this liquid out of the reach of children.

3. Exposure estimation and reference to its source

Consumers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 27: Use in metal working fluids / rolling oils

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC7: Industrial spraying PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC17: Lubrication at high energy conditions and in partly open process
Environmental Release Categories	ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Activity	Covers the use in formulated MWFs/rolling oils including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.

2.1 Contributing scenario controlling environmental exposure for: ERC4

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

ODOURLESS KEROSENE**Workers**

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 28: Use in metal working fluids / rolling oils

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring PROC17: Lubrication at high energy conditions and in partly open process
Environmental Release Categories	ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems
Activity	Covers the use in formulated MWFs/rolling oils including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC10, PROC13, PROC17

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

ODOURLESS KEROSENE**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 29: Use as Functional Fluids

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Environmental Release Categories	ERC7: Industrial use of substances in closed systems
Activity	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers.

2.1 Contributing scenario controlling environmental exposure for: ERC7

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

ODOURLESS KEROSENE

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.
Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 30: Use as Functional Fluids

Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)
Chemical product category	PC16: Heat transfer fluids PC17: Hydraulic fluids
Environmental Release Categories	ERC9a: Wide dispersive indoor use of substances in closed systems ERC9b: Wide dispersive outdoor use of substances in closed systems
Activity	Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants

2.1 Contributing scenario controlling environmental exposure for: ERC9a, ERC9b

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling consumer exposure for: PC16, PC17

Product characteristics	Physical Form (at time of use)	liquid
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)	Consumer Measures	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion A DNEL cannot be derived Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. Keep lamps filled with this liquid out of the reach of children.

3. Exposure estimation and reference to its source

Consumers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. 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.

Risk management measures are based on qualitative risk characterisation.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 31: Use as Functional Fluids

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure 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 preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems
Environmental Release Categories	ERC9a: Wide dispersive indoor use of substances in closed systems ERC9b: Wide dispersive outdoor use of substances in closed systems
Activity	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in professional equipment including maintenance and related material transfers.

2.1 Contributing scenario controlling environmental exposure for: ERC9a, ERC9b

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC8a, PROC9, PROC20

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to

ODOURLESS KEROSENE

at least equivalent levels.
Available hazard data do not support the need for a DNEL to be established for other health effects.
Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 32: Use in road and construction applications

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring
Environmental Release Categories	ERC8d: Wide dispersive outdoor use of processing aids in open systems ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Activity	Bulk loading (including marine vessel/barge, rail/road car and IBC loading) of substance within closed or contained systems, including incidental exposures during its sampling, storage, unloading, maintenance and associated laboratory activities.

2.1 Contributing scenario controlling environmental exposure for: ERC8d, ERC8f

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. Where other Risk

ODOURLESS KEROSENE

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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 33: Use as water treatment chemicals

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC13: Treatment of articles by dipping and pouring
Environmental Release Categories	ERC3: Formulation in materials ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Activity	Covers the use of the substance for the treatment of water at industrial facilities in open and closed systems.

2.1 Contributing scenario controlling environmental exposure for: ERC3, ERC4

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC13

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. Where other Risk

ODOURLESS KEROSENE

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.

Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.

ODOURLESS KEROSENE

1. Short title of Exposure Scenario 34: Use as water treatment chemicals

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC13: Treatment of articles by dipping and pouring
Environmental Release Categories	ERC8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Activity	Covers the use of the substance for the treatment of water in open and closed systems.

2.1 Contributing scenario controlling environmental exposure for: ERC8f

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC13

Product characteristics	Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 100 %.
	Physical Form (at time of use)	liquid
Frequency and duration of use	Covers daily exposures up to 8 hours	
Organisational measures to prevent /limit releases, dispersion and exposure	The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures For substances classified as H304, the following measures need to be implemented to control the aspiration hazard Do not ingest. If swallowed then seek immediate medical attention Do NOT induce vomiting. A DNEL cannot be derived	

3. Exposure estimation and reference to its source

Workers

Qualitative approach used to conclude safe use.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to

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at least equivalent levels.
Available hazard data do not support the need for a DNEL to be established for other health effects.
Risk management measures are based on qualitative risk characterisation.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Assumes a good basic standard of occupational hygiene is implemented.