

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 02-Oct-2019***

Revision date 14-Nov-2025

Revision Number 2

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

1.1. Product identifier

Product Code(s) 57993***

Safety data sheet number 57993***

Product Name HYDROCARBONS, C10-C13, AROMATICS, >1% NAPHTHALENE

EC Number 926-273-4***

Synonyms SOLVESSO 200, SOLVENT NAPHTHA 200***

Pure substance/mixture Substance***

Contains HYDROCARBONS C10 - 13 AROMATICS, >1% NAPHTHALENE; NAPHTHALENE

Molecular weight 154***

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

Recommended use

- Solvent
- Intermediate
- Chemicals used in the synthesis and / or formulation of industrial products
- Cleaning agent
- Coatings
- oil gas
- Lubricant
- Functional fluids
- Use in agrochemicals
- Fuels***

1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Carcinogenicity	Category 2*** - (H351)***
Aspiration hazard	Category 1*** - (H304)***
Chronic aquatic toxicity	Category 2*** - (H411)***

2.2. Label elements

Contains HYDROCARBONS C10 - 13 AROMATICS, >1% NAPHTHALENE; NAPHTHALENE



Signal word

Danger***

Hazard statements

H304 - May be fatal if swallowed and enters airways

H351 - Suspected of causing cancer

H411 - Toxic to aquatic life with long lasting effects***

EUH066 - Repeated exposure may cause skin dryness or cracking***

Precautionary statements

P201 - Obtain special instructions before use

P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P331 - Do NOT induce vomiting

P391 - Collect spillage***

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances***

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
HYDROCARBONS C10 - 13 AROMATICS, >1%	90 - 100%	926-273-4***	-	Aquatic Chronic 2 (H411) Asp. Tox. 1 (H304)	-	-	-

NAPHTHALENE*** -				Carc. 2 (H351)***			
NAPHTHALENE*** 91-20-3	10 - 20%	202-049-5***	-	Aquatic Chronic 1 (H410) Aquatic Acute 1 (H400) Acute Tox. 4 (H302) Carc. 2 (H351)***	-	1***	1***

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

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	IF exposed or concerned: Get medical advice/attention. Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.***
Inhalation	Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.***
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.***
Self-protection of the first aider	Use personal protective equipment as required.***

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

Symptoms	Difficulty in breathing. Coughing and/ or wheezing. Dizziness.***
Inhalation	Coughing and/or wheezing.***
Dermal	Repeated exposure may cause skin dryness or cracking.***
Ingestion	May be fatal if swallowed and enters airways***

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

Note to doctors	Because of the danger of aspiration, emesis or gastric lavage should not be used unless the risk is justified by the presence of additional toxic substances.***
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.***
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Large Fire

CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media

Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon oxides.***

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation. Use personal protective equipment as required.***

Other information

Refer to protective measures listed in Sections 7 and 8.***

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions

See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections

See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing.***

General hygiene considerations

Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.***

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Keep at > -8 °C.***

Packaging materials

Suitable container/equipment material: stainless steel. Carbon Steel. Polyester resin. Teflon. Unsuitable container/equipment material: Polystyrene. Polypropylene.***

7.3. Specific end use(s)

Specific use(s)

See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers ***

Chemical name	Oral	Dermal	Inhalation
HYDROCARBONS C10 - 13 AROMATICS, >1% NAPHTHALENE*** -		12.5 mg/kg/day***	151 mg/m ³ ***
NAPHTHALENE*** 91-20-3		3.57 mg/kg bw/day [4] [6]***	25 mg/m ³ [4] [6] 25 mg/m ³ [5] [6]***

[4] Systemic health effects.***
[5] Local health effects.***
[6] Long term.***

Derived No Effect Level (DNEL) - General Public ***

Chemical name	Oral	Dermal	Inhalation
HYDROCARBONS C10 - 13 AROMATICS, >1% NAPHTHALENE*** -	7.5 mg/kg/day***	7.5 mg/kg/day***	32 mg/m ³ ***

Predicted No Effect Concentration (PNEC) ***

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
NAPHTHALENE*** 91-20-3	2.4 µg/L ***	20 µg/L ***	2.4 µg/L ***		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
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Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
NAPHTHALENE*** 91-20-3	67.2 µg/kg sediment dw***	67.2 µg/kg sediment dw***	2.9 mg/L ***	53.3 µg/kg soil dw***	

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.***

Hand protection Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.***

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)***	Viton™***	0.71 mm***	8 hours***

Skin and body protection Wear suitable protective clothing.***

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Type A.***

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.***

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state Liquid***
Appearance Clear liquid***
Colour Colourless to pale yellow***
Odour Aromatic.***
Odour threshold No information available

Property	Values
Melting point / freezing point	-12*** °C***
Initial boiling point and boiling range	230*** -*** 282*** °C***
Flammability	
Flammability Limit in Air	
Upper flammability or explosive limits	6.0%***
Lower flammability or explosive limits	0.6%***
Flash point	101*** - °C***
Autoignition temperature	481*** °C***
Decomposition temperature	
pH	
pH (as aqueous solution)	

Remarks • Method

 ASTM D 86.***
 No information available.
 No information available.

CC (closed cup).***
 ASTM E 659.***
 No information available.
 No information available.
 No information available.

Kinematic viscosity	2.20*** cSt***	40.0 °C.***
Dynamic viscosity		No information available.
Water solubility	Immiscible with water***	***
Solubility(ies)		No information available.
Partition coefficient	log Pow: > 4***	***
Vapour pressure	0.04 mmHg***	@ 20.0 °C.***
Relative density	0.99***	15.0 °C.***
Bulk density	990 kg/m ³ ***	***
Liquid Density	No information available	No information available
Relative vapour density	5.3 @ 101 kPa***	***
Particle characteristics		No information available.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	Not considered to be explosive.***	
Oxidising properties	Does not meet the criteria for classification as oxidising***	

9.2. Other information

Molecular weight 154*** < 0.01 (butyl acetate = 1)***

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable under recommended storage conditions.***

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition. Excessive heat.***

10.5. Incompatible materials

Incompatible materials Strong oxidising agents.***

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides.***

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information ***

Inhalation Aspiration into lungs can produce severe lung damage. May cause irritation.***

Eye contact May cause irritation.***

Skin contact Repeated exposure may cause skin dryness or cracking.***

Ingestion May be fatal if swallowed and enters airways.***

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Difficulty in breathing. Coughing and/ or wheezing. Dizziness.***

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
NAPHTHALENE***	= 1110 mg/kg (Rat) ***	= 1120 mg/kg (Rabbit)***	> 0.4 mg/L (Rat) 4 h***

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Repeated exposure may cause skin dryness or cracking.***

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Suspected of causing cancer.***

The table below indicates whether each agency has listed any ingredient as a carcinogen.***

Chemical name	United Kingdom
HYDROCARBONS C10 - 13 AROMATICS, >1% NAPHTHALENE***	Carc. 2***
NAPHTHALENE***	Carc. 2***

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

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

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Toxic to aquatic life with long lasting effects.***

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
NAPHTHALENE***	-	LC50: 5.74 - 6.44mg/L (96h, Pimephales promelas) LC50: =1.6mg/L (96h, Oncorhynchus mykiss) LC50: 0.91 - 2.82mg/L (96h, Oncorhynchus mykiss) LC50: =1.99mg/L (96h, Pimephales promelas) LC50: =31.0265mg/L (96h, Lepomis macrochirus)***	-	LC50: =2.16mg/L (48h, Daphnia magna) EC50: =1.96mg/L (48h, Daphnia magna) EC50: 1.09 - 3.4mg/L (48h, Daphnia magna)***

12.2. Persistence and degradability

Persistence and degradability Expected to be readily biodegradable.***

12.3. Bioaccumulative potential

Bioaccumulation No information available.***

Component Information

Chemical name	Partition coefficient
NAPHTHALENE***	3.4***

12.4. Mobility in soil

Mobility in soil Insoluble.***

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
NAPHTHALENE***	The substance is not PBT / vPvB***

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN3082***
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (HYDROCARBONS C10 - 13 AROMATICS, >1% NAPHTHALENE, NAPHTHALENE)***
14.3 Transport hazard class(es)	9***
14.4 Packing group	III***
14.5 Environmental hazards	Yes***
14.6 Special precautions for user	
Special Provisions	A97, A158, A197***
ERG Code	9L***

IMDG

14.1 UN number or ID number	UN3082***
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (HYDROCARBONS C10 - 13 AROMATICS, >1% NAPHTHALENE, NAPHTHALENE)***
14.3 Transport hazard class(es)	9***
14.4 Packing group	III***
14.5 Environmental hazards	Yes***
14.6 Special precautions for user	
Special Provisions	274, 335, 969***
EmS-No	F-A, S-F***
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN3082***
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (HYDROCARBONS C10 - 13 AROMATICS, >1% NAPHTHALENE, NAPHTHALENE)***
14.3 Transport hazard class(es)	9***
14.4 Packing group	III***
14.5 Environmental hazards	Yes***
14.6 Special precautions for user	
Special Provisions	274, 335, 375, 601***
Classification code	M6***

ADR

14.1 UN number or ID number	UN3082***
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (HYDROCARBONS C10 - 13 AROMATICS, >1% NAPHTHALENE, NAPHTHALENE)***
14.3 Transport hazard class(es)	9***
14.4 Packing group	III***
14.5 Environmental hazards	Yes***
14.6 Special precautions for user	
Special Provisions	274, 335, 601, 375***
Classification code	M6***
Tunnel restriction code	(-)*

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).
This product does not contain substances subject to authorisation (UK REACH - Annex XIV).***

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Dangerous substance category per COMAH Regulations 2015 (as amended)

E2 - Hazardous to the Aquatic Environment in Category Chronic 2***

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Chemical name	The Water Environment Regulations 2017 (as amended)
NAPHTHALENE*** - 91-20-3	Priority substance***

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report

A Chemical Safety Assessment has been carried out for this substance***

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H351 - Suspected of causing cancer
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H411 - Toxic to aquatic life with long lasting effects***

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note ***Indicates updated data since last publication

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity***	Calculation method***
Acute dermal toxicity***	Calculation method***
Acute inhalation toxicity - gas***	Calculation method***
Acute inhalation toxicity - vapour***	Calculation method***
Acute inhalation toxicity - dust/mist***	Calculation method***
Skin corrosion/irritation***	Calculation method***
Serious eye damage/eye irritation***	Calculation method***
Respiratory sensitisation***	Calculation method***
Skin sensitisation***	Calculation method***
Mutagenicity***	Calculation method***
Carcinogenicity***	Calculation method***
Reproductive toxicity***	Calculation method***
STOT - single exposure***	Calculation method***
STOT - repeated exposure***	Calculation method***
Acute aquatic toxicity***	Calculation method***
Chronic aquatic toxicity***	Calculation method***
Aspiration hazard***	Calculation method***
Ozone***	Calculation method***

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By Jitendra Panchal***

Supersedes date 02-Oct-2019***

Revision date 14-Nov-2025

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Manufacture of substance
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC1 - Manufacture of substances ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Specific Environmental Release Category ESVOC SpERC 1.1.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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

Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC1 - Manufacture of substances
 - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Specific Environmental Release Category - ESVOC SpERC 1.1.v1

Amounts used

Type	Annual site tonnage
Value	2200
Units	t(ons)/year
Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	22000
Units	kg/d

Type	Regional use tonnage
Value	2200
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	100
Release fraction to air from process (initial release prior to RMM)	0.001
Release fraction to wastewater from process (initial release prior to RMM)	0.0003
Release fraction to soil from process (initial release prior to RMM)	0.0001
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	10000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater sediment Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 90%
Water	If discharging to domestic sewage treatment plant, no onsite wastewater treatment required If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 54.3% Not applicable as there is no release to wastewater

Conditions and measures related to external treatment of waste for disposal

Disposal	This substance is consumed during use and no waste of the substance is generated
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%

Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	General exposures (open systems)

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Process sampling

Process category(ies)	PROC15 - Use as laboratory reagent
Title	Laboratory activities

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers (open systems)

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers (closed systems)

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances
- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Specific Environmental Release Category - ESVOC SpERC 1.1.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 120000 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000068
Waste Water		<= 0.18

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture	Substance
REACH registration number	01-2119451151-53-XXXX
EC No (EU Index No)	926-273-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Distribution of substance
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC1 - Manufacture of substances ERC2 - Formulation of preparations (mixtures) 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
Specific Environmental Release Category	ESVOC SpERC 1.1b.v1
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) 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
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

- Environmental release category(ies)** - ERC1 - Manufacture of substances
- ERC2 - Formulation of preparations (mixtures)
 - 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

Specific Environmental Release Category - ESVOC SpERC 1.1b.v1

Amounts used

Type	Annual site tonnage
Value	1
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	0.002

Type	Maximum daily site tonnage
Value	50
Units	kg/d

Type	Regional use tonnage
Value	500
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	0.0001
Release fraction to wastewater from process (initial release prior to RMM)	0.00001
Release fraction to soil from process (initial release prior to RMM)	0.00001
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 90%
Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	General exposures (open systems)

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Process sampling

Process category(ies)	PROC15 - Use as laboratory reagent
Title	Laboratory activities

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers (open systems)

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers (closed systems)
Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Drum and small package filling
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Transfer via enclosed lines
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Transfer via enclosed lines

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances

- ERC2 - Formulation of preparations (mixtures)

- 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

Specific Environmental Release Category - ESVOC SpERC 1.1b.v1

Predicted No Effect Concentration (PNEC)

Calculation method

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe

110000 kg/d

Remarks

Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000023
Waste Water		<= 0.00047

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Use as an intermediate
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
Specific Environmental Release Category ESVOC SpERC 6.1a.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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

Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8
 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 -
 Manufacture of fine chemicals

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

Specific Environmental Release Category - ESVOC SpERC 6.1a.v1

Amounts used

Type	Annual site tonnage
Value	130
Units	t(ons)/year
Type	Fraction of EU tonnage used in region
Value	0.1
Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	6300
Units	kg/d

Type	Regional use tonnage
Value	130
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	0.0001
Release fraction to wastewater from process (initial release prior to RMM)	0.0003
Release fraction to soil from process (initial release prior to RMM)	0.001
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater sediment Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 80%
Water	If discharging to domestic sewage treatment plant, no onsite wastewater treatment required If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 68.3% Not applicable as there is no release to wastewater

Conditions and measures related to external treatment of waste for disposal

Disposal	This substance is consumed during use and no waste of the substance is generated
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).

Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	General exposures (open systems)
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Process sampling
Process category(ies)	PROC15 - Use as laboratory reagent
Title	Laboratory activities
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers (open systems)
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers (closed systems)
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Section 3 - Exposure estimation

Environmental release category(ies) - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

Specific Environmental Release Category - ESVOC SpERC 6.1a.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 24000 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000025
Waste Water		<= 0.26

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Formulation & (re)packing of substances and mixtures
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC2 - Formulation of preparations (mixtures)
Specific Environmental Release Category ESVOC SpERC 2.2.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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 (multi-stage 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, pelettising
 PROC15 - Use as laboratory reagent
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
Specific Environmental Release Category - ESVOC SpERC 2.2.v1

Amounts used

Type	Annual site tonnage
Value	200
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
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Value	0.1
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Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	2000
Units	kg/d

Type	Regional use tonnage
Value	200
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	100
Release fraction to air from process (initial release prior to RMM)	0.005
Release fraction to wastewater from process (initial release prior to RMM)	0.0002
Release fraction to soil from process (initial release prior to RMM)	0.0001
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater sediment Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 0%
Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure	
Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	General exposures (open systems)

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Batch process Elevated temperature
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Process sampling

Process category(ies)	PROC15 - Use as laboratory reagent
Title	Laboratory activities

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Title	Mixing operations (open systems)

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Manual
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Drum/batch transfers
Process category(ies)	PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Drum and small package filling
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
Specific Environmental Release Category - ESVOC SpERC 2.2.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 35000 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.000018
Waste Water		<= 0.056

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative

approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture	Substance
REACH registration number	01-2119451151-53-XXXX
EC No (EU Index No)	926-273-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Coatings
Type	Worker
Main user group	Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies)	ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Specific Environmental Release Category	ESVOC SpERC 4.3a.v1
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) 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 (multi-stage 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, pelettising PROC15 - Use as laboratory reagent
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category - ESVOC SpERC 4.3a.v1

Amounts used

Type	Annual site tonnage
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Value	30
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	1500
Units	kg/d

Type	Regional use tonnage
Value	30
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	0.98
Release fraction to wastewater from process (initial release prior to RMM)	0.0007
Release fraction to soil from process (initial release prior to RMM)	0
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater sediment Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 90%
Water	If discharging to domestic sewage treatment plant, no onsite wastewater treatment required If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 42.4% Not applicable as there is no release to wastewater

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems) Use in contained systems
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Film formation Elevated temperature
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Mixing operations (closed systems) General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Film formation

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Title	Preparation of material for application Mixing operations (open systems)

Process category(ies)	PROC7 - Industrial spraying
Title	Automated task
Technical conditions and measures to control dispersion from source towards the worker	Carry out in a vented booth provided with laminar airflow

Process category(ies)	PROC7 - Industrial spraying
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Title	Manual spraying
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Material transfers
Technical conditions and measures to control dispersion from source towards the worker	Clear transfer lines prior to de-coupling
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Material transfers
Technical conditions and measures to control dispersion from source towards the worker	Clear transfer lines prior to de-coupling
Process category(ies)	PROC10 - Roller application or brushing
Title	Roller, spreader, flow application
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Technical conditions and measures to control dispersion from source towards the worker	Avoid manual contact with wet work pieces
Process category(ies)	PROC15 - Use as laboratory reagent
Title	Laboratory activities
Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Material transfers Drum/batch transfers
Process category(ies)	PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage

Section 3 - Exposure estimation

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category - ESVOC SpERC 4.3a.v1

Predicted No Effect Concentration (PNEC)

Calculation method

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe

10000 kg/d

Remarks

Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
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Air		<= 0.000051
Waste Water		<= 0.15

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks

Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Cleaning agent
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Specific Environmental Release Category ESVOC SpERC 4.4a.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category - ESVOC SpERC 4.4a.v1

Amounts used

Type	Annual site tonnage
Value	2
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
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Value	1
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Type	Maximum daily site tonnage
Value	100
Units	kg/d

Type	Regional use tonnage
Value	2
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	1
Release fraction to wastewater from process (initial release prior to RMM)	0.000003
Release fraction to soil from process (initial release prior to RMM)	0
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 70%
Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure	
Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Bulk transfers
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Automated process with (semi) closed systems Use in contained systems
Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Automated process with (semi) closed systems Drum/batch transfers
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Washing and cleaning products
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Filling/preparation of equipment from drums or containers.
Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Use in contained systems Batch process
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Title	Degreaser
Process category(ies)	PROC10 - Roller application or brushing
Title	Cleaning with low-pressure washers
Process category(ies)	PROC7 - Industrial spraying
Title	Cleaning with high-pressure washers
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Process category(ies)	PROC10 - Roller application or brushing
Title	Material transfers Manual Surface cleaning
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage

Section 3 - Exposure estimation

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category - ESVOC SpERC 4.4a.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 220000 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.000013
Waste Water		<= 0.00045

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Lubricants
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
 ERC7 - Industrial use of substances in closed systems
Specific Environmental Release Category ESVOC SpERC 4.6a.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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

Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
 - ERC7 - Industrial use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 4.6a.v1

Amounts used

Type	Annual site tonnage
Value	50
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	2500
Units	kg/d

Type	Regional use tonnage
Value	50
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	0.001
Release fraction to wastewater from process (initial release prior to RMM)	0.00003
Release fraction to soil from process (initial release prior to RMM)	0.001
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater sediment Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 70%
Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	General exposures (open systems)

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
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Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
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Process category(ies)	PROC18 - Greasing at high energy conditions
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Process category(ies)	PROC10 - Roller application or brushing
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Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Technical conditions and measures to control dispersion from source towards the worker	Restrict area of openings to equipment
Process category(ies)	PROC7 - Industrial spraying
Technical conditions and measures to control dispersion from source towards the worker	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Elevated temperature
Technical conditions and measures to control dispersion from source towards the worker	Drain down and flush system prior to equipment break-in or maintenance
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Technical conditions and measures to control dispersion from source towards the worker	Avoid manual contact with wet work pieces
Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Re-manufacture of reject articles
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Transfer via enclosed lines
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Transfer via enclosed lines

Section 3 - Exposure estimation

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC7 - Industrial use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 4.6a.v1

**Predicted No Effect Concentration
(PNEC)**

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Msafe 240000 kg/d
Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000025
Waste Water		<= 0.011

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Metal working fluids / rolling oils,
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Specific Environmental Release Category ESVOC SpERC 4.7a.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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 (multi-stage 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
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category - ESVOC SpERC 4.7a.v1

Amounts used

Type	Annual site tonnage
Value	10
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	50
Units	kg/d

Type	Regional use tonnage
Value	10
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	0.02
Release fraction to wastewater from process (initial release prior to RMM)	0.00003
Release fraction to soil from process (initial release prior to RMM)	0
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 70%
Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	General exposures (open systems)

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers
Technical conditions and measures to control dispersion from source towards the worker	Clear transfer lines prior to de-coupling

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Process sampling
Technical conditions and measures to control dispersion from source towards the worker	Use dedicated equipment
Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
Title	Metal machining operations
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Technical conditions and measures to control dispersion from source towards the worker	Allow time for product to drain from work piece
Process category(ies)	PROC7 - Industrial spraying
Technical conditions and measures to control dispersion from source towards the worker	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings
Process category(ies)	PROC10 - Roller application or brushing
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Automated metal rolling/forming Elevated temperature
Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
Title	Semi-automated metal rolling/forming Elevated temperature
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)
Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Semi-automated metal rolling/forming
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Transfer via enclosed lines
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Organisational measures to prevent /limit releases, dispersion and	Transfer via enclosed lines

exposure

Section 3 - Exposure estimation

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category - ESVOC SpERC 4.7a.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Msafe 84000 kg/d
Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000024
Waste Water		<= 0.0006

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Binder and Release agents
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Specific Environmental Release Category ESVOC SpERC 4.10a.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC6 - Calendaring 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, pelettising

Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category - ESVOC SpERC 4.10a.v1

Amounts used

Type	Annual site tonnage
Value	0.5
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
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Value	0.1
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Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	25
Units	kg/d

Type	Regional use tonnage
Value	0.5
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	1
Release fraction to wastewater from process (initial release prior to RMM)	0.000003
Release fraction to soil from process (initial release prior to RMM)	0
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 80%
Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure	
Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Material transfers
Technical conditions and measures to control dispersion from source towards the worker	Transfer via enclosed lines

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Material transfers
Technical conditions and measures to control dispersion from source towards the worker	Transfer via enclosed lines

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Material transfers
Technical conditions and measures to control dispersion from source towards the worker	Transfer via enclosed lines

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Drum/batch transfers

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Bulk transfers Mixing operations (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Formulate in enclosed or ventilated mixing vessels

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Mixing operations (open systems)

Process category(ies)	PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
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Process category(ies)	PROC6 - Calendaring operations
Title	Casting (open systems) Elevated temperature Aerosol
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)

Process category(ies)	PROC7 - Industrial spraying
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Title	Machine
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)

Process category(ies)	PROC10 - Roller application or brushing
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Process category(ies)	PROC7 - Industrial spraying
Title	Manual
Technical conditions and measures to control dispersion from source towards the worker	Carry out in a vented booth or extracted enclosure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
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Section 3 - Exposure estimation

Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category - ESVOC SpERC 4.10a.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 60000 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.000004
Waste Water		<= 0.00042

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Fuels
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC7 - Industrial use of substances in closed systems
Specific Environmental Release Category ESVOC SpERC 7.12a.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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

Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC7 - Industrial use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 7.12a.v1

Amounts used

Type	Annual site tonnage
Value	370
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	18000

Units	kg/d
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Type	Regional use tonnage
Value	370
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	0.005
Release fraction to wastewater from process (initial release prior to RMM)	0.00001
Release fraction to soil from process (initial release prior to RMM)	0
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater sediment Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 95%
Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater

Conditions and measures related to external treatment of waste for disposal

Disposal	This substance is consumed during use and no waste of the substance is generated
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent	Do not ingest. If swallowed then seek immediate medical assistance

/limit releases, dispersion and exposure	
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Drum/batch transfers
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems) Use in contained systems Batch process
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems) Use in contained systems Batch process
Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems) Use in contained systems Batch process
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Process category(ies)	PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected
Title	Fuels (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Process category(ies)	PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected
Title	Fuels
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system
Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Organisational measures to prevent /limit releases, dispersion and exposure	Transfer via enclosed lines

Section 3 - Exposure estimation

Environmental release category(ies) - ERC7 - Industrial use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 7.12a.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Msafe 710000 kg/d
Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000039
Waste Water		<= 0.026

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Functional fluids
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC7 - Industrial use of substances in closed systems
Specific Environmental Release Category ESVOC SpERC 7.13a.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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)
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC7 - Industrial use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 7.13a.v1

Amounts used

Type	Annual site tonnage
Value	2.2
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
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Value	110
Units	kg/d

Type	Regional use tonnage
Value	2.2
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	0.001
Release fraction to wastewater from process (initial release prior to RMM)	0.00003
Release fraction to soil from process (initial release prior to RMM)	0.001
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater sediment Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 0%
Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0%

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid

Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Bulk transfers (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Transfer via enclosed lines

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Bulk transfers (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Transfer via enclosed lines

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Drum/batch transfers

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	(closed systems)

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	General exposures (open systems)

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Re-manufacture of reject articles

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage

Section 3 - Exposure estimation

Environmental release category(ies) - ERC7 - Industrial use of substances in closed systems

Specific Environmental Release Category - ESVOC SpERC 7.13a.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Msafe 240000 kg/d
Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000021558
Waste Water		<= 0.0004594

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Use in laboratories
Type Worker
Main user group Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category(ies) ERC2 - Formulation of preparations (mixtures) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Process category(ies) PROC10 - Roller application or brushing
 PROC15 - Use as laboratory reagent
Sector(s) of use SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
 - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Amounts used

Type	Annual site tonnage
Value	0.1
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	5
Units	kg/d

Type	Regional use tonnage
Value	0.1
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	20
Release fraction to air from process (initial release prior to RMM)	0.025
Release fraction to wastewater from process (initial release prior to RMM)	0.02
Release fraction to soil from process (initial release prior to RMM)	0.0001
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater sediment Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 0%
Water	If discharging to domestic sewage treatment plant, no onsite wastewater treatment required If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and	Do not ingest. If swallowed then seek immediate medical assistance

exposure	
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Process category(ies)	PROC15 - Use as laboratory reagent
Title	Laboratory activities
Process category(ies)	PROC10 - Roller application or brushing

Section 3 - Exposure estimation

Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)
- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 350 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000023
Waste Water		<= 0.014

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Coatings
Type Worker
Main user group Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category ESVOC SpERC 8.3b.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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 (multi-stage 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
 SU22 - Professional uses

Sector(s) of use

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.3b.v1

Amounts used

Type	Annual site tonnage
Value	0.05
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	0.14
Units	kg/d

Type	Regional use tonnage
Value	100
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.98
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.01
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Filling/preparation of equipment from drums or containers. Use in contained systems
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems) Use in contained systems
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Preparation of material for application Use in contained systems Batch process

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Film formation Outdoor use

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Film formation Indoor use

Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Title	Preparation of material for application Indoor use

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Material transfers Drum/batch transfers
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
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Title	Material transfers Drum/batch transfers
Process category(ies)	PROC10 - Roller application or brushing
Title	Roller, spreader, flow application Indoor use
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)
Process category(ies)	PROC10 - Roller application or brushing
Title	Roller, spreader, flow application Outdoor use
Process category(ies)	PROC11 - Non industrial spraying
Title	Spraying Indoor use
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Process category(ies)	PROC11 - Non industrial spraying
Title	Spraying Outdoor use
Covers concentrations up to	5%
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Title	Indoor use
Technical conditions and measures to control dispersion from source towards the worker	Avoid manual contact with wet work pieces
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Title	Outdoor use
Technical conditions and measures to control dispersion from source towards the worker	Avoid manual contact with wet work pieces
Process category(ies)	PROC15 - Use as laboratory reagent
Title	Laboratory activities
Process category(ies)	PROC19 - Hand-mixing with intimate contact and only PPE available
Title	Hand application - fingerpaints, pastels, adhesives Indoor use
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)
Process category(ies)	PROC19 - Hand-mixing with intimate contact and only PPE available
Title	Hand application - fingerpaints, pastels, adhesives Outdoor use
Technical conditions and measures to control dispersion from source towards the worker	Ensure operation is undertaken outdoors

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems

- ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.3b.v1

**Predicted No Effect Concentration
(PNEC)**

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Msafe 240 kg/d
Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.00016
Waste Water		<= 0.00058

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Cleaning agent
Type Worker
Main user group Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category ESVOC SpERC 8.4b.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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

Sector(s) of use SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems

Specific Environmental Release Category - ESVOC SpERC 8.4b.v1

Amounts used

Type	Fraction of regional tonnage used locally
Value	0.0005

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.02
Release fraction to soil from process (initial release prior to RMM)	0
Release fraction to wastewater from wide dispersive use	0.000001
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Automated process with (semi) closed systems Use in contained systems

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Automated process with (semi) closed systems Drum/batch transfers Use in contained systems

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Semi-automated process (e.g. semi-automatic application of floor care and maintenance products)

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Filling/preparation of equipment from drums or containers.
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Title	Manual Surface cleaning
Process category(ies)	PROC10 - Roller application or brushing
Title	Cleaning with low-pressure washers Rolling, brushing No Spraying
Technical conditions and measures to control dispersion from source towards the worker	Limit the substance content in the product to 25 %
Process category(ies)	PROC11 - Non industrial spraying
Title	Spraying Indoor use Cleaning with high-pressure washers
Technical conditions and measures to control dispersion from source towards the worker	Limit the substance content in the product to 5 %
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Process category(ies)	PROC11 - Non industrial spraying
Title	Spraying Outdoor use Cleaning with high-pressure washers
Technical conditions and measures to control dispersion from source towards the worker	Limit the substance content in the product to 5 %
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Process category(ies)	PROC10 - Roller application or brushing
Title	Manual Surface cleaning Spraying
Technical conditions and measures to control dispersion from source towards the worker	Limit the substance content in the product to 25 %
Process category(ies)	PROC10 - Roller application or brushing
Title	Manual Surface cleaning
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Process category(ies)	PROC10 - Roller application or brushing
Title	Ad hoc manual application via trigger sprays, dipping, etc Rolling, brushing
Technical conditions and measures to control dispersion from source towards the worker	Limit the substance content in the product to 25 %
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Washing and cleaning products (closed systems) Outdoor use
Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Medical Devices

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.4b.v1

Predicted No Effect Concentration
(PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Remarks Qualitative approach used to conclude safe use

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture	Substance
REACH registration number	01-2119451151-53-XXXX
EC No (EU Index No)	926-273-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Lubricants
Type	Worker
Main user group	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies)	ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category	ESVOC SpERC 9.6b.v1
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) 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
Sector(s) of use	SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 9.6b.v1

Amounts used

Type	Annual site tonnage
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Value	0.013
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	0.034
Units	kg/d

Type	Regional use tonnage
Value	25
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.01
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national
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	regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems
Title	Equipment cleaning and maintenance

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	General exposures (open systems)

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
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Title	Filling/preparation of equipment from drums or containers.
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)
Process category(ies)	PROC18 - Greasing at high energy conditions
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)
Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
Title	Outdoor use
Technical conditions and measures to control dispersion from source towards the worker	Limit the substance content in the product to 25 %
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Equipment cleaning and maintenance Elevated temperature
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Elevated temperature
Technical conditions and measures to control dispersion from source towards the worker	Drain down system prior to equipment break-in or maintenance
Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Engine lubricant service
Process category(ies)	PROC10 - Roller application or brushing
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)
Process category(ies)	PROC11 - Non industrial spraying
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A/P2 filter or better
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Technical conditions and measures to control dispersion from source towards the worker	Allow time for product to drain from work piece
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Section 3 - Exposure estimation

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems

- ERC9b - Wide dispersive outdoor use of substances in closed systems

Specific Environmental Release Category - ESVOC SpERC 9.6b.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 76 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.000041
Waste Water		<= 0.00045

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name	Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture	Substance
REACH registration number	01-2119451151-53-XXXX
EC No (EU Index No)	926-273-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Lubricants
Type	Worker
Main user group	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies)	ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category	ESVOC SpERC 8.6c.v1
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) 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
Sector(s) of use	SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.6c.v1

Amounts used

Type	Annual site tonnage
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Value	0.013
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	0.034
Units	kg/d

Type	Regional use tonnage
Value	25
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.015
Release fraction to wastewater from process (initial release prior to RMM)	0.05
Release fraction to soil from process (initial release prior to RMM)	0.05
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national
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	regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems
Title	Equipment cleaning and maintenance

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	General exposures (open systems)

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
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Title	Filling/preparation of equipment from drums or containers.
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)
Process category(ies)	PROC18 - Greasing at high energy conditions
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)
Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
Title	Outdoor use
Technical conditions and measures to control dispersion from source towards the worker	Limit the substance content in the product to 25 %
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Equipment cleaning and maintenance Elevated temperature
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Elevated temperature
Technical conditions and measures to control dispersion from source towards the worker	Drain down system prior to equipment break-in or maintenance
Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Engine lubricant service
Process category(ies)	PROC10 - Roller application or brushing
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)
Process category(ies)	PROC11 - Non industrial spraying
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A/P2 filter or better
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Technical conditions and measures to control dispersion from source towards the worker	Allow time for product to drain from work piece
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.6c.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 55 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.00021
Waste Water		<= 0.00062

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Metal working fluids / rolling oils,
Type Worker
Main user group Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category ESVOC SpERC 8.7c.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage 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

Sector(s) of use SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.7c.v1

Amounts used

Type	Annual site tonnage
Value	0.00025
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	0.00068
Units	kg/d

Type	Regional use tonnage
Value	0.5
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.015
Release fraction to wastewater from process (initial release prior to RMM)	0.05
Release fraction to soil from process (initial release prior to RMM)	0.05
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Handle substance within a closed system

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Bulk transfers

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Filling/preparation of equipment from drums or containers.
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Process sampling
Technical conditions and measures to control dispersion from source towards	Use dedicated equipment

the worker	
Process category(ies)	PROC17 - Lubrication at high energy conditions and in partly open process
Title	Metal machining operations
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)
Process category(ies)	PROC10 - Roller application or brushing
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)
Process category(ies)	PROC11 - Non industrial spraying
Technical conditions and measures to control dispersion from source towards the worker	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A/P2 filter or better
Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Technical conditions and measures to control dispersion from source towards the worker	Allow time for product to drain from work piece
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Equipment cleaning and maintenance Elevated temperature
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Equipment cleaning and maintenance
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
Process category(ies)	PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)
Title	Filling/preparation of equipment from drums or containers.

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems

- ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.7c.v1

**Predicted No Effect Concentration
(PNEC)**

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Msafe 1.7 kg/d
Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000064
Waste Water		<= 0.00041

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Binder and Release agents
Type Worker
Main user group Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category ESVOC SpERC 8.10b.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC6 - Calendaring 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, pelettising

Sector(s) of use SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.10b.v1

Amounts used

Type	Annual site tonnage
Value	0.00025
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
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Value	0.1
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Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	0.00068
Units	kg/d

Type	Regional use tonnage
Value	0.5
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.95
Release fraction to wastewater from process (initial release prior to RMM)	0.025
Release fraction to soil from process (initial release prior to RMM)	0.025
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or
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	national regulations
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Control of worker exposure	
Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Material transfers (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Transfer via enclosed lines

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Material transfers (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Transfer via enclosed lines

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Material transfers (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Transfer via enclosed lines

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Drum/batch transfers

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	Mixing operations (closed systems)
Technical conditions and measures to control dispersion from source towards the worker	Formulate in enclosed or ventilated mixing vessels

Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Mixing operations (open systems)

Process category(ies)	PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)

Process category(ies)	PROC6 - Calendaring operations
Title	Casting (open systems) Elevated temperature

Process category(ies)	PROC11 - Non industrial spraying
Title	Machine

Technical conditions and measures to control dispersion from source towards the worker	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings
Process category(ies)	PROC10 - Roller application or brushing
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Process category(ies)	PROC11 - Non industrial spraying
Title	Manual spraying
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Drum/batch transfers
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems

- ERC8d - Wide dispersive outdoor use of processing aids in open systems

Specific Environmental Release Category - ESVOC SpERC 8.10b.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 1.7 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000043
Waste Water		<= 0.00041

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Use in agrochemicals
Type Worker
Main user group Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category ESVOC SpERC 8.11a.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 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
 PROC11 - Non industrial spraying
 PROC13 - Treatment of articles by dipping and pouring
Sector(s) of use SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.11a.v1

Amounts used

Type	Annual site tonnage
Value	2.9
Units	t(ons)/year
Type	Fraction of EU tonnage used in region
Value	0.1
Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	8.1
Units	kg/d

Type	Regional use tonnage
Value	1500
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.9
Release fraction to soil from process (initial release prior to RMM)	0.01
Release fraction to wastewater from wide dispersive use	0.01
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater sediment Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
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Process category(ies)	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises
Title	Mixing operations (open systems)

Process category(ies)	PROC11 - Non industrial spraying
Title	Manual spraying
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better

Process category(ies)	PROC11 - Non industrial spraying
Title	Machine
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of controlled ventilation (10 to 15 air changes per hour)

Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
Title	Ad hoc manual application via trigger sprays, dipping, etc

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance
Technical conditions and measures to control dispersion from source towards the worker	Drain down system prior to equipment break-in or maintenance

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.11a.v1

**Predicted No Effect Concentration
(PNEC)**

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 710 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0097
Waste Water		<= 0.011

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Functional fluids
Type Worker
Main user group Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies) ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category ESVOC SpERC 9.13b.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 PROC2 - Use in closed, continuous process with occasional controlled exposure
 PROC3 - Use in closed batch process (synthesis or formulation)
 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
Sector(s) of use SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
 - ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 9.13b.v1

Amounts used

Type	Annual site tonnage
Value	0.0011
Units	t(ons)/year
Type	Fraction of EU tonnage used in region
Value	0.1
Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	0.003
Units	kg/d

Type	Regional use tonnage
Value	2.2
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.05
Release fraction to wastewater from process (initial release prior to RMM)	0.025
Release fraction to soil from process (initial release prior to RMM)	0.025
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Drum/batch transfers
Technical conditions and measures to control dispersion from source towards the worker	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
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Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Filling/preparation of equipment from drums or containers.

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	General exposures (closed systems)

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	General exposures (closed systems)

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation)
Title	General exposures (closed systems)

Process category(ies)	PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems
Title	Operation of equipment containing engine oils and similar

Process category(ies)	PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems
Title	Operation of equipment containing engine oils and similar Elevated temperature

Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance
Technical conditions and measures to control dispersion from source towards the worker	Drain down system prior to equipment break-in or maintenance

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure
Title	Storage
Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure
Title	Storage

Technical conditions and measures to control dispersion from source towards the worker	Store substance within a closed system
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Section 3 - Exposure estimation

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 9.13b.v1

Predicted No Effect Concentration (PNEC)

Calculation method	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model	
Msafe	57 kg/d	
Remarks	Qualitative approach used to conclude safe use	
Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.000011015
Waste Water		<= 0.000385315

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title road and construction products.
Type Worker
Main user group Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category ESVOC SpERC 8.15.v1
Process category(ies) PROC1 - Use in closed process, no likelihood of exposure
 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

Sector(s) of use SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.15.v1

Amounts used

Type	Annual site tonnage
Value	0.00025
Units	t(ons)/year
Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	0.00068
Units	kg/d

Type	Regional use tonnage
Value	0.5
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.95
Release fraction to wastewater from process (initial release prior to RMM)	0.04
Release fraction to soil from process (initial release prior to RMM)	0.01
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure	
Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent /limit releases, dispersion and exposure	Do not ingest. If swallowed then seek immediate medical assistance
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Drum/batch transfers
Technical conditions and measures to control dispersion from source towards the worker	Ensure operation is undertaken outdoors
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Technical conditions and measures to control dispersion from source towards the worker	Clear transfer lines prior to de-coupling
Process category(ies)	PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
Title	Drum/batch transfers Elevated temperature
Technical conditions and measures to control dispersion from source towards the worker	Clear transfer lines prior to de-coupling
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Organisational measures to prevent /limit releases, dispersion and exposure	Use dedicated equipment
Process category(ies)	PROC10 - Roller application or brushing
Technical conditions and measures to control dispersion from source towards the worker	Ensure operation is undertaken outdoors
Process category(ies)	PROC11 - Non industrial spraying
Title	Machine Elevated temperature
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Technical conditions and measures to control dispersion from source towards the worker	Automate activity where possible Stay upwind/keep distance from source
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better
Organisational measures to prevent /limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures
Process category(ies)	PROC11 - Non industrial spraying

Title	General exposures (closed systems) Machine
Conditions and measures related to personal protection, hygiene and health evaluation	Wear a respirator conforming to EN 140 with Type A filter or better

Process category(ies)	PROC13 - Treatment of articles by dipping and pouring
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Process category(ies)	PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities
Title	Equipment cleaning and maintenance
Technical conditions and measures to control dispersion from source towards the worker	Retain drain downs in sealed storage pending disposal or for subsequent recycle
Organisational measures to prevent /limit releases, dispersion and exposure	Ensure operation is undertaken outdoors

Process category(ies)	PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Title	Drum and small package filling

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.15.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Msafe 1.7 kg/d
Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000031
Waste Water		<= 0.00041

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus,

scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
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 6 Mid Point Business Park
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Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Use in laboratories
Type Worker
Main user group Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems
Specific Environmental Release Category ESVOC SpERC 8.17.v1
Process category(ies) PROC10 - Roller application or brushing
 PROC15 - Use as laboratory reagent
Sector(s) of use SU22 - Professional uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.17.v1

Amounts used

Type	Annual site tonnage
Value	0.00005
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	1

Type	Maximum daily site tonnage
Value	0.00014
Units	kg/d

Type	Regional use tonnage
Value	0.1
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.5
Release fraction to wastewater from process (initial release prior to RMM)	0.5
Release fraction to soil from process (initial release prior to RMM)	0
Remarks	Common practices vary across sites, thus conservative process release estimates used.

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%
Removal efficiency (total)	91.6%
Sludge treatment	Do not apply industrial sludge to natural soils Sludge should be incinerated, contained or reclaimed

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Risk from environmental exposure is driven by freshwater Prevent discharge of undissolved substance to or recover from onsite wastewater
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Control measures to prevent releases

Air	Treat air emission to provide a typical removal efficiency of 0%
Water	If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0% Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0% Not applicable as there is no release to wastewater

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of worker exposure

Title	General measures applicable to all activities
Covers concentrations up to	100%
Physical form of product	Liquid
Use frequency	Covers daily exposures up to 8 hours (unless stated differently).
Technical conditions and measures to control dispersion from source towards the worker	H304 - May be fatal if swallowed and enters airways Do NOT induce vomiting
Organisational measures to prevent	Do not ingest. If swallowed then seek immediate medical assistance

/limit releases, dispersion and exposure	
Remarks	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Process category(ies)	PROC15 - Use as laboratory reagent
Title	Laboratory activities
Process category(ies)	PROC10 - Roller application or brushing
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.17.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Msafe 0.33 kg/d
Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.00001
Waste Water		<= 0.00042

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Risk management measures are based on qualitative risk characterization Qualitative approach used to conclude safe use

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterization. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Lubricants
Type Consumer
Main user group Consumer uses: Private households (= general public = consumers)
Environmental release category(ies) ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category ESVOC SpERC 9.6d.v1
Product category(ies) PC1 - Adhesives, sealants PC24 - Lubricants, greases, release products PC31 - Polishes and wax blends
Sector(s) of use SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
 - ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 9.6d.v1

Amounts used

Type	Annual site tonnage
Value	0.0013
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	0.0005

Type	Maximum daily site tonnage
Value	0.0034
Units	kg/d

Type	Regional use tonnage
Value	2.5

Units	t(ons)/year
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Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.01

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Control measures to prevent releases

Water	Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of consumer exposure

Title	General measures applicable to all activities
Physical form of product	Liquid
Risk management measures	H304 - May be fatal if swallowed and enters airways Do not ingest. If swallowed then seek immediate medical assistance Do NOT induce vomiting HARMFUL - MAY CAUSE LUNG DAMAGE IF SWALLOWED Keep away from children

Product categories [PC]	PC1 - Adhesives, sealants
Product (sub) category(ies)	Glues, hobby use
Covers concentrations up to	30%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 9 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 365 days per year
Covers skin contact area up to	35.73 cm2
Use in room with a volume of minimum	20 m3
Operational conditions	Covers use under typical household ventilation.

	Covers use at ambient temperatures
Product categories [PC]	PC1 - Adhesives, sealants
Product (sub) category(ies)	Glues DIY-use (carpet glue, tile glue, wood parquet glue)
Covers concentrations up to	30%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 6390 g/event
Exposure duration	Avoid carrying out operation for more than 6 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 1 days per year
Covers skin contact area up to	110 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures
Product categories [PC]	PC1 - Adhesives, sealants
Product (sub) category(ies)	Glue from spray
Covers concentrations up to	30%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 85.05 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 6 days per year
Covers skin contact area up to	35.73 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures
Product categories [PC]	PC1 - Adhesives, sealants
Product (sub) category(ies)	Sealant
Covers concentrations up to	30%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 75 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 365 days per year
Risk management measures	Ensure doors and windows are opened
Covers skin contact area up to	35.73 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures
Product categories [PC]	PC24 - Lubricants, greases, release products
Product (sub) category(ies)	Liquids
Covers concentrations up to	100%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 2200 g/event
Exposure duration	Avoid carrying out operation for more than 0.17 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 4 days per year
Covers skin contact area up to	468 cm ²
Use in room with a volume of minimum	34 m ³
Minimum room ventilation rate for handling/application (air changes per hour)	1.5

Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures
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Product categories [PC]	PC24 - Lubricants, greases, release products
Product (sub) category(ies)	Pastes
Covers concentrations up to	20%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 34 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 10 days per year
Covers skin contact area up to	468 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC24 - Lubricants, greases, release products
Product (sub) category(ies)	Sprays
Covers concentrations up to	50%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 73 g/event
Exposure duration	Avoid carrying out operation for more than 0.17 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 6 days per year
Covers skin contact area up to	428.75 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC31 - Polishes and wax blends
Product (sub) category(ies)	Polishes, wax / cream (floor, furniture, shoes)
Covers concentrations up to	50%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 142 g/event
Exposure duration	Avoid carrying out operation for more than 1.23 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 29 days per year
Covers skin contact area up to	430 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC31 - Polishes and wax blends
Product (sub) category(ies)	Polishes, spray (furniture, shoes)
Covers concentrations up to	50%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 35 g/event
Exposure duration	Avoid carrying out operation for more than 0.33 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 8 days per year
Covers skin contact area up to	430 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Section 3 - Exposure estimation

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 9.6d.v1

**Predicted No Effect Concentration
(PNEC)**

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 8.3 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.00021
Waste Water		<= 0.00062

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Not applicable

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Lubricants
Type Consumer
Main user group Consumer uses: Private households (= general public = consumers)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category ESVOC SpERC 8.6e.v1
Product category(ies) PC1 - Adhesives, sealants PC24 - Lubricants, greases, release products PC31 - Polishes and wax blends
Sector(s) of use SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.6e.v1

Amounts used

Type	Annual site tonnage
Value	0.0013
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	0.0005

Type	Maximum daily site tonnage
Value	0.0034
Units	kg/d

Type	Regional use tonnage
Value	2.5

Units	t(ons)/year
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Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.015
Release fraction to wastewater from process (initial release prior to RMM)	0.05
Release fraction to soil from process (initial release prior to RMM)	0.05

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Control measures to prevent releases

Water	Not applicable as there is no release to wastewater
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Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of consumer exposure

Title	General measures applicable to all activities
Physical form of product	Liquid
Risk management measures	H304 - May be fatal if swallowed and enters airways Do not ingest. If swallowed then seek immediate medical assistance Do NOT induce vomiting HARMFUL - MAY CAUSE LUNG DAMAGE IF SWALLOWED Keep away from children

Product categories [PC]	PC1 - Adhesives, sealants
Product (sub) category(ies)	Glues, hobby use
Covers concentrations up to	30%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 9 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 365 days per year
Covers skin contact area up to	35.73 cm2
Use in room with a volume of minimum	20 m3
Operational conditions	Covers use under typical household ventilation.

	Covers use at ambient temperatures
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Product categories [PC]	PC1 - Adhesives, sealants
Product (sub) category(ies)	Glues DIY-use (carpet glue, tile glue, wood parquet glue)
Covers concentrations up to	30%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 6390 g/event
Exposure duration	Avoid carrying out operation for more than 6 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 1 days per year
Covers skin contact area up to	110 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC1 - Adhesives, sealants
Product (sub) category(ies)	Glue from spray
Covers concentrations up to	30%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 85.05 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 6 days per year
Covers skin contact area up to	35.73 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC1 - Adhesives, sealants
Product (sub) category(ies)	Sealant
Covers concentrations up to	30%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 75 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 1 hour
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 365 days per year
Covers skin contact area up to	35.73 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC24 - Lubricants, greases, release products
Product (sub) category(ies)	Liquids
Covers concentrations up to	100%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 2200 g/event
Exposure duration	Avoid carrying out operation for more than 0.17 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 4 days per year
Covers skin contact area up to	468 cm ²
Use in room with a volume of minimum	34 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC24 - Lubricants, greases, release products
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Product (sub) category(ies)	Pastes
Covers concentrations up to	20%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 34 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 10 days per year
Covers skin contact area up to	468 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC24 - Lubricants, greases, release products
Product (sub) category(ies)	Sprays
Covers concentrations up to	50%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 73 g/event
Exposure duration	Avoid carrying out operation for more than 0.17 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 6 days per year
Covers skin contact area up to	428.75 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC31 - Polishes and wax blends
Product (sub) category(ies)	Polishes, wax / cream (floor, furniture, shoes)
Covers concentrations up to	50%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 142 g/event
Exposure duration	Avoid carrying out operation for more than 1.23 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 29 days per year
Covers skin contact area up to	430 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC31 - Polishes and wax blends
Product (sub) category(ies)	Polishes, spray (furniture, shoes)
Covers concentrations up to	50%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 35 g/event
Exposure duration	Avoid carrying out operation for more than 0.33 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 8 days per year
Covers skin contact area up to	430 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.6e.v1

**Predicted No Effect Concentration
(PNEC)**

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 8 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.000021
Waste Water		<= 0.00043

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Not applicable

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Use in agrochemicals
Type Consumer
Main user group Consumer uses: Private households (= general public = consumers)
Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category ESVOC SpERC 8.11b.v1
Product category(ies) PC12 - Fertilisers PC27 - Plant protection products
Sector(s) of use SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.11b.v1

Amounts used

Type	Annual site tonnage
Value	0.02
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	0.0005

Type	Maximum daily site tonnage
Value	0.055
Units	kg/d

Type	Regional use tonnage
Value	10
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.9
Release fraction to wastewater from process (initial release prior to RMM)	0.09
Release fraction to soil from process (initial release prior to RMM)	0.01

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Conditions and measures related to external recovery of waste

Method	External recovery and recycling of waste should comply with applicable local and/or national regulations
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations
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Control of consumer exposure

Title	General measures applicable to all activities
Physical form of product	Liquid
Risk management measures	H304 - May be fatal if swallowed and enters airways Do not ingest. If swallowed then seek immediate medical assistance Do NOT induce vomiting HARMFUL - MAY CAUSE LUNG DAMAGE IF SWALLOWED Keep away from children

Product categories [PC]	PC12 - Fertilisers
Product (sub) category(ies)	Lawn and garden preparations
Covers concentrations up to	15%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 0.3 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 365 days per year
Covers skin contact area up to	857.5 cm2
Use in room with a volume of minimum	20 m3
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Product categories [PC]	PC27 - Plant protection products
Covers concentrations up to	15%

Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 0.3 g/event
Exposure duration	Avoid carrying out activities involving exposure for more than 4 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 365 days per year
Covers skin contact area up to	857.5 cm ²
Use in room with a volume of minimum	20 m ³
Operational conditions	Covers use under typical household ventilation. Covers use at ambient temperatures

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category - ESVOC SpERC 8.11b.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Msafe 110 kg/d
Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.000066
Waste Water		<= 0.00048

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Not applicable

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Fuels
Type Consumer
Main user group Consumer uses: Private households (= general public = consumers)
Environmental release category(ies) ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category ESVOC SpERC 9.12c.v1
Product category(ies) PC13 - Fuels
Sector(s) of use SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
 - ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 9.12c.v1

Amounts used

Type	Annual site tonnage
Value	0.1
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	0.0005

Type	Maximum daily site tonnage
Value	0.28
Units	kg/d

Type	Regional use tonnage
Value	210
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.0001
Release fraction to wastewater from process (initial release prior to RMM)	0.00001
Release fraction to soil from process (initial release prior to RMM)	0.00001

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Control measures to prevent releases

Water	Not applicable as there is no release to wastewater
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Conditions and measures related to external treatment of waste for disposal

Disposal	This substance is consumed during use and no waste of the substance is generated
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Control of consumer exposure

Title	General measures applicable to all activities
Physical form of product	Liquid
Risk management measures	H304 - May be fatal if swallowed and enters airways Do not ingest. If swallowed then seek immediate medical assistance Do NOT induce vomiting HARMFUL - MAY CAUSE LUNG DAMAGE IF SWALLOWED Keep away from children

Product categories [PC]	PC13 - Fuels
Product (sub) category(ies)	Liquid: automotive refuelling
Covers concentrations up to	100%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 37500 g/event
Exposure duration	Avoid carrying out operation for more than 0.05 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 52 days per year
Covers skin contact area up to	210 cm2
Indoor/Outdoor use	Outdoor use
Use in room with a volume of minimum	100 m3
Operational conditions	Covers use at ambient temperatures

Product categories [PC]	PC13 - Fuels
Product (sub) category(ies)	Liquid: scooter refuelling
Covers concentrations up to	100%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 3750 g/event

Exposure duration	Avoid carrying out operation for more than 0.03 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 52 days per year
Covers skin contact area up to	210 cm2
Indoor/Outdoor use	Outdoor use
Use in room with a volume of minimum	100 m3
Operational conditions	Covers use at ambient temperatures

Product categories [PC]	PC13 - Fuels
Product (sub) category(ies)	Liquid: garden equipment - use
Covers concentrations up to	100%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 750 g/event
Exposure duration	Avoid carrying out operation for more than 2 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 26 days per year
Covers skin contact area up to	420 cm2
Indoor/Outdoor use	Outdoor use
Use in room with a volume of minimum	100 m3
Operational conditions	Covers use at ambient temperatures

Product categories [PC]	PC13 - Fuels
Product (sub) category(ies)	Liquid: garden equipment - refuelling
Covers concentrations up to	100%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 750 g/event
Exposure duration	Avoid carrying out operation for more than 0.03 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 26 days per year
Covers skin contact area up to	420 cm2
Use in room with a volume of minimum	34 m3
Operational conditions	Covers use at ambient temperatures Covers use under typical household ventilation.

Product categories [PC]	PC13 - Fuels
Product (sub) category(ies)	Liquid: home space heater fuel
Covers concentrations up to	100%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 3000 g/event
Exposure duration	Avoid carrying out operation for more than 0.03 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 365 days per year
Covers skin contact area up to	210 cm2
Use in room with a volume of minimum	20 m3
Operational conditions	Covers use at ambient temperatures Covers use under typical household ventilation.

Section 3 - Exposure estimation

**Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems**
Specific Environmental Release Category - ESVOC SpERC 9.12c.v1

Predicted No Effect Concentration

(PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 690 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.0000026
Waste Water		<= 0.00041

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Not applicable

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Chemical name Hydrocarbons, C10-C13, aromatics, >1% naphthalene
Pure substance/mixture Substance
REACH registration number 01-2119451151-53-XXXX
EC No (EU Index No) 926-273-4
Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 GBR

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

E-mail address SDS.EMEA@univarsolutions.com

Section 1 - Title

Title Functional fluids
Type Consumer
Main user group Consumer uses: Private households (= general public = consumers)
Environmental release category(ies) ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category ESVOC SpERC 9.13c.v1
Product category(ies) PC16 - Heat transfer fluids PC17 - Hydraulic fluids
Sector(s) of use SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
 - ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 9.13c.v1

Amounts used

Type	Annual site tonnage
Value	0.011
Units	t(ons)/year

Type	Fraction of EU tonnage used in region
Value	0.1

Type	Fraction of regional tonnage used locally
Value	0.0005

Type	Maximum daily site tonnage
Value	0.03
Units	kg/d

Type	Regional use tonnage
Value	22
Units	t(ons)/year

Product characteristics

Remarks	Substance is complex UVCB
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Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.05
Release fraction to wastewater from process (initial release prior to RMM)	0.025
Release fraction to soil from process (initial release prior to RMM)	0.025

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	91.6%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Control measures to prevent releases

Water	Not applicable as there is no release to wastewater
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Conditions and measures related to external treatment of waste for disposal

Disposal	This substance is consumed during use and no waste of the substance is generated
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Control of consumer exposure

Title	General measures applicable to all activities
Physical form of product	Liquid
Risk management measures	H304 - May be fatal if swallowed and enters airways Do not ingest. If swallowed then seek immediate medical assistance Do NOT induce vomiting HARMFUL - MAY CAUSE LUNG DAMAGE IF SWALLOWED Keep away from children

Product categories [PC]	PC16 - Heat transfer fluids
Product (sub) category(ies)	Liquids
Covers concentrations up to	100%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Amounts used	Amount per use 2200 g/event
Exposure duration	Avoid carrying out operation for more than 0.17 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 4 days per year
Covers skin contact area up to	468 cm2
Use in room with a volume of minimum	34 m3
Operational conditions	Covers use at ambient temperatures Covers use under typical household ventilation.

Product categories [PC]	PC17 - Hydraulic fluids
Product (sub) category(ies)	Liquids
Covers concentrations up to	100%
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP

Amounts used	Amount per use 2200 g/event
Exposure duration	Avoid carrying out operation for more than 0.17 hours
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). Covers use up to 1 events per day Covers use up to 4 days per year
Covers skin contact area up to	468 cm ²
Use in room with a volume of minimum	34 m ³
Operational conditions	Covers use at ambient temperatures Covers use under typical household ventilation.

Section 3 - Exposure estimation

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems
Specific Environmental Release Category - ESVOC SpERC 9.13c.v1

Predicted No Effect Concentration (PNEC)

Calculation method The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Msafe 57 kg/d

Remarks Qualitative approach used to conclude safe use

Environment	predicted exposure level	Risk characterisation ratio (RCR)
Air		<= 0.000011015
Waste Water		<= 0.000385315

Derived No Effect Level (DNEL):

Worker - dermal, long-term - systemic	12.5 mg/kg bw/d
Worker - inhalative, long-term - systemic	151 mg/m ³
Consumer - oral, long-term - systemic	7.5 mg/kg bw/d
Consumer - dermal, long-term - systemic	7.5 mg/kg bw/d
Consumer - inhalative, long-term - systemic	32 mg/m ³

Remarks Not applicable

Section 4 - Guidance to check compliance with the exposure scenario

Available hazard data does not support the need for a DNEL to be established for other health effects. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.