



SAFETY DATA SHEET
HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

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

1.1. Product identifier

Product name	HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS
Product number	23050
Synonyms; trade names	SPIRDANE D40, LUGTFRI PETROLEUM D40, SHELLSOL D40, NESSOL LIAV 200, SPIRDANE D 60 L, WHITE SPIRIT TBT, WHITE SPIRIT D40, WHITE SPIRIT D30, SOLVENT D40, CLAIRSOL 310, KLA D40, D 40
REACH registration number	01-2119463258-33-XXXX
CAS number	1174522-20-3
EC number	919-857-5

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

Identified uses	Industrial Solvent Surface coating Cleaning agent. Lubricant. Metallurgical Industry Binder Release Agent Formulation Lab Reagent Water Treatment For further information, see attached Exposure Scenario.
-----------------	--

1.3. Details of the supplier of the safety data sheet

Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com
----------	---

1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	23050

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 3 - H226
Health hazards	STOT SE 3 - H336 Asp. Tox. 1 - H304
Environmental hazards	Not Classified

2.2. Label elements

EC number	919-857-5
-----------	-----------

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

Hazard pictograms



Signal word

Danger

Hazard statements

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.

Precautionary statements

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Supplemental label information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS
REACH registration number	01-2119463258-33-XXXX
CAS number	1174522-20-3
EC number	919-857-5
Composition comments	The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention.
Ingestion	Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

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

Inhalation	Drowsiness, dizziness, disorientation, vertigo. Coughing, chest tightness, feeling of chest pressure.
Ingestion	Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Skin contact	Prolonged skin contact may cause redness and irritation.

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

Eye contact May cause temporary eye irritation.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Solvent vapours may form explosive mixtures with air.

Hazardous combustion products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No smoking, sparks, flames or other sources of ignition near spillage. Avoid inhalation of spray mist and contact with skin and eyes. Provide adequate ventilation. Take precautionary measures against static discharges.

6.2. Environmental precautions

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Avoid spilling. Provide adequate ventilation. Static electricity and formation of sparks must be prevented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Earth container and transfer equipment to eliminate sparks from static electricity. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Store away from the following materials: Oxidising materials.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): 150 ppm 1000 mg/m³

DNEL

Workers - Inhalation; Long term systemic effects: 1500 mg/m³
 Workers - Dermal; Long term systemic effects: 300 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 900 mg/m³
 Consumer - Dermal; Long term systemic effects: 300 mg/kg/day
 Consumer - Oral; Long term systemic effects: 300 mg/kg/day

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Provide eyewash station and safety shower.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The selected gloves should have a breakthrough time of at least 8 hours. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear fire/flammable resistant/retardant clothing. Wear appropriate clothing to prevent repeated or prolonged skin contact. For the greatest protection, clothing should include anti-static overalls, boots and gloves.

Hygiene measures

Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Wash contaminated clothing before reuse.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. If ventilation is inadequate, suitable respiratory protection must be worn. Gas filter, type A2. EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Characteristic.
Odour threshold	No information available.
pH	Not applicable.
Melting point	No information available.

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

Pour Point	No information available.
Freezing Point	No information available.
Initial boiling point and range	150 - 205°C
Flash point	> 41°C
Evaporation rate	65 - 115 (diethyl ether = 1)
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	Upper flammable/explosive limit: 7.0 % Lower flammable/explosive limit: 0.6 %
Other flammability	No information available.
Vapour pressure	300 Pa @ 20°C
Vapour density	4.8
Relative density	No information available.
Bulk density	770 - 812 kg/m ³
Solubility(ies)	Insoluble in water.
Partition coefficient	log Pow: 5 - 6.7
Auto-ignition temperature	>230°C
Decomposition Temperature	No information available.
Viscosity	~1.48 cSt @ 25°C
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Refractive index	No information available.
Particle size	No information available.
Molecular weight	143
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No test data specifically related to reactivity available for this product or its ingredients.
------------	--

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
-----------	---

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Avoid contact with the following materials: Strong acids. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 5000 mg/kg, Oral, Rat OECD 401

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 3160 mg/kg, Dermal, Rabbit OECD 402

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ (4h) > 4951 mg/m³, Inhalation, Vapour, Rat

Skin corrosion/irritation

Skin corrosion/irritation No information available.

Animal data

Slightly irritating.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties. Bacterial reverse mutation test: Negative. Chromosome aberration: Negative.

Genotoxicity - in vivo This substance has no evidence of mutagenic properties. DNA damage and/or repair: Negative. Chromosome aberration: Negative.

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Reproductive toxicity - development

Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure May cause drowsiness or dizziness.

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

Target organs Central nervous system Kidneys

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

Inhalation Vapours may cause drowsiness and dizziness.

Ingestion May be fatal if swallowed and enters airways. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

Skin contact Slightly irritating. Repeated exposure may cause skin dryness or cracking.

Eye contact May cause temporary eye irritation.

SECTION 12: Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: > 1000 mg/l, Oncorhynchus mykiss (Rainbow trout)
OECD 203

Acute toxicity - aquatic invertebrates EC50, 48 hours: > 1000 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants EC50, 72 hours: > 1000 mg/l, Scenedesmus subspicatus
OECD 201

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 28 days: 0.131 mg/l, Oncorhynchus mykiss (Rainbow trout)
Calculation method.

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.23 mg/l, Daphnia magna
Calculation method.

12.2. Persistence and degradability

Persistence and degradability The substance is readily biodegradable.

Biodegradation - Degradation 80%: 28 day
OECD 301F

12.3. Bioaccumulative potential

Bioaccumulative potential May accumulate in soil and water systems.

Partition coefficient log Pow: 5 - 6.7

12.4. Mobility in soil

Mobility The product has poor water-solubility.

Surface tension 0.0237 mN/m @ 25°C

12.5. Results of PBT and vPvB assessment

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

UN No. (ADR/RID) 3295

UN No. (IMDG) 3295

UN No. (ICAO) 3295

UN No. (ADN) 3295

14.2. UN proper shipping name

Proper shipping name (ADR/RID) HYDROCARBONS, LIQUID, N.O.S. (HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS)

Proper shipping name (IMDG) HYDROCARBONS, LIQUID, N.O.S. (HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS)

Proper shipping name (ICAO) HYDROCARBONS, LIQUID, N.O.S. (HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS)

Proper shipping name (ADN) HYDROCARBONS, LIQUID, N.O.S. (HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS)

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID classification code F1

ADR/RID label 3

IMDG class 3

ICAO class/division 3

ADN class 3

Transport labels



14.4. Packing group

ADR/RID packing group III

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

IMDG packing group III

ICAO packing group III

ADN packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS F-E, S-D

ADR transport category 3

Emergency Action Code 3Y

Hazard Identification Number 30
(ADR/RID)

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78
and the IBC Code Not determined.

SECTION 15: Regulatory information

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

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.
This product may impact SEVESO storage regulations.

Seveso Directive - Control of major accident hazards P5c

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

29/03/2023

Version number

2.002

Supersedes date

25/08/2022

SDS number

23050

HYDROCARBONS C9 - C11 N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

SDS status	Approved.
Hazard statements in full	H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H336 May cause drowsiness or dizziness.
Signature	Jitendra Panchal

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



Exposure scenario

Manufacture of substance - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Manufacture of substance - Industrial
Process scope	Manufacture of the substance or use as a process chemical or extraction agent. Includes recycling/recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling and associated laboratory activities.
Main sector	SU3 Industrial uses
Sector of use	SU8 Manufacture of bulk, large-scale chemicals (including petroleum products) SU9 Manufacture of fine chemicals

Environment

Environmental release category	ERC1 Manufacture of the substance ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
--------------------------------	---

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC15 Use as laboratory reagent.
------------------	--

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Manufacture of substance - Industrial

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Distribution of substance - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Distribution of substance - Industrial
Process scope	Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.
Main sector	SU3 Industrial uses
Sector of use	SU8 Manufacture of bulk, large-scale chemicals (including petroleum products) SU9 Manufacture of fine chemicals

Environment

Environmental release category	ERC1 Manufacture of the substance ERC2 Formulation into mixture ERC3 Formulation into solid matrix ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC5 Use at industrial site leading to inclusion into/onto article ERC6a Use of intermediate ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article) ERC6c Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article) ERC6d Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article) ERC7 Use of functional fluid at industrial site
---------------------------------------	---

Worker

Distribution of substance - Industrial

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.
-------------------------	--

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system. Transfer via enclosed lines.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Formulation & (re)packing of substances and mixtures - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Formulation & (re)packing of substances and mixtures - Industrial
Process scope	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.
Main sector	SU3 Industrial uses
Sector of use	SU10 Formulation [mixing] of preparations and/or re-packaging
<u>Environment</u>	
Environmental release category	ERC2 Formulation into mixture
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.

Formulation & (re)packing of substances and mixtures - Industrial

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system. Transfer via enclosed lines.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Coatings - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in Coatings - Industrial
Process scope	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	

Use in Coatings - Industrial

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC15 Use as laboratory reagent.
-------------------------	---

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
--------------------	---

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Store substance within a closed system.
--------------------------------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented.
--------------------------------	---

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
--------------------------	--

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Uses in Coatings - Professional

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Uses in Coatings - Professional
Process scope	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods and film formation) and equipment cleaning, maintenance and associated laboratory activities.
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

Worker

Uses in Coatings - Professional

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC15 Use as laboratory reagent. PROC19 Manual activities involving hand contact
-------------------------	--

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
--------------------	---

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Store substance within a closed system.
--------------------------------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented.
--------------------------------	---

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
--------------------------	--

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario Use in Cleaning Agents - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in Cleaning Agents - Industrial
Process scope	Covers the use as a component of cleaning products, including transfer from storage, pouring/unloading from drums or containers and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Use in Cleaning Agents - Industrial

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Cleaning Agents - Professional

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in Cleaning Agents - Professional
Process scope	Covers the use as a component of cleaning products, including pouring/unloading from drums or containers and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand).
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
--------------------------------	---

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.
------------------	--

2. Conditions of use affecting exposure (Workers - Health 1)

Use in Cleaning Agents - Professional

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario Lubricants - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Lubricants - Industrial
Process scope	Covers the use of formulated lubricants in closed and open systems, including transfer operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC7 Use of functional fluid at industrial site
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations PROC18 General greasing/lubrication at high kinetic energy conditions

Lubricants - Industrial

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system. Treatment by dipping and pouring Allow time for product to drain from workpiece.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario Lubricants - Professional

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Lubricants - Professional
Process scope	Covers the use of formulated lubricants in closed and open systems, including transfer operations, operation of engines and similar articles, reworking on reject articles, equipment maintenance and disposal of waste oil.
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC9b Widespread use of functional fluid (outdoor)
<u>Worker</u>	

Lubricants - Professional

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations PROC18 General greasing/lubrication at high kinetic energy conditions PROC20 Use of functional fluids in small devices
-------------------------	---

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
--------------------	---

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Store substance within a closed system. Treatment by dipping and pouring Allow time for product to drain from workpiece.
--------------------------------------	--

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented.
--------------------------------	---

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
--------------------------	--

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario
Metal working fluids / rolling oils - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Metal working fluids / rolling oils - Industrial
Process scope	Covers the use in formulated MWFs/rolling oils, including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	

Metal working fluids / rolling oils - Industrial

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations
-------------------------	--

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
--------------------	---

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Store substance within a closed system.
--------------------------------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented.
--------------------------------	---

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
--------------------------	--

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Metal working fluids / rolling oils - Professional

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Metal working fluids / rolling oils - Professional
Process scope	Covers the use in formulated MWFs, including transfer operations, open and contained cutting/machining activities, automated and manual application of corrosion protections, draining and working on contaminated/ reject articles and disposal of waste oils.
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations

Metal working fluids / rolling oils - Professional

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use as binders and release agents - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use as binders and release agents - Industrial
Process scope	Covers the use as binders and release agents, including material transfers, mixing, application (including spraying and brushing), mould forming and casting and handling of waste.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC6 Calendering operations. PROC7 Industrial spraying PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC14 Tableting, compression, extrusion, pelletisation, granulation

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
----------------	--

Use as binders and release agents - Industrial

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Store substance within a closed system.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use as binders and release agents - Professional

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use as binders and release agents - Professional
Process scope	Covers the use as binders and release agents, including material transfers, mixing, application (including spraying and brushing), mould forming and casting and handling of waste.
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
---------------------------------------	---

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC6 Calendering operations. PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC14 Tableting, compression, extrusion, pelletisation, granulation
-------------------------	---

Use as binders and release agents - Professional

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario Functional Fluids - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Functional Fluids - Industrial
Process scope	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment, including maintenance and related material transfers.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC7 Use of functional fluid at industrial site
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Functional Fluids - Industrial

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Functional Fluids - Professional

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Functional Fluids - Professional
Process scope	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment, including maintenance and related material transfers.
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC20 Use of functional fluids in small devices

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Functional Fluids - Professional

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Road and construction applications - Professional

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Road and construction applications - Professional
Process scope	Application of surface coatings and binders in road and construction activities, including paving uses, manual mastic and in the application of roofing and water-proofing membranes.
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) ERC8f Widespread use leading to inclusion into/onto article (outdoor)
<u>Worker</u>	
Process category	PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Road and construction applications - Professional

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented. Spraying/fogging by machine application Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 4 hours.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in laboratories - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in laboratories - Industrial
Process scope	Use of the substance within laboratory settings, including material transfers and equipment cleaning.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC2 Formulation into mixture ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	
Process category	PROC10 Roller application or brushing PROC15 Use as laboratory reagent.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
-------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented.
-------------------------	---

Use in laboratories - Industrial

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in laboratories - Professional

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in laboratories - Professional
Process scope	Use of small quantities within laboratory settings, including material transfers and equipment cleaning.
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
<u>Worker</u>	
Process category	PROC10 Roller application or brushing PROC15 Use as laboratory reagent.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
-------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented.
-------------------------	---

Use in laboratories - Professional

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Water treatment chemicals - Industrial

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Water treatment chemicals - Industrial
Process scope	Covers the use of the substance for the treatment of water at industrial facilities in open and closed systems.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC3 Formulation into solid matrix ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Water treatment chemicals - Industrial

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Water treatment chemicals - Professional

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Water treatment chemicals - Professional
Process scope	Covers the use of the substance for the treatment of water in open and closed systems.
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8f Widespread use leading to inclusion into/onto article (outdoor)
--------------------------------	---

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC13 Treatment of articles by dipping and pouring.
------------------	---

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Water treatment chemicals - Professional

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Store substance within a closed system.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario Uses in Coatings - Consumer

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Uses in Coatings - Consumer
Process scope	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.
Product category	PC1 Adhesives, sealants. PC4 Anti-freeze and de-icing products. PC8a Excipient only PC9a Coatings and paints, thinners, paint removers. PC9b Fillers, putties, plasters, modelling clay. PC9c Finger paints. PC15 Non-metal-surface treatment products. PC18 Ink and toners. PC23 Leather treatment products PC24 Lubricants, greases and release products. PC31 Polishes and wax blends. PC34 Textile dyes and impregnating products
Main sector	SU21 Consumer uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Control of Non-industrial exposure

Uses in Coatings - Consumer

PC1 Adhesives, sealants. PC9a Coatings and paints, thinners, paint removers. PC9b Fillers, putties, plasters, modelling clay. PC9c Finger paints PC18 Ink and toners.

Product characteristics

Physical state

Liquid, vapour pressure > 10 Pa (STP)

Concentration details

Covers concentrations up to 100 %. Unless otherwise stated.

PC1 Adhesives, sealants. Covers concentrations up to 30 %. PC9a_1 Water-borne latex wall paint Covers concentrations up to 1.5 %. PC9a_2 Solvent-rich, high-solid, water-borne paint Covers concentrations up to 27.5 %. PC9a_3 Aerosol spray can PC9a_4 Removers (paint-, glue-, wallpaper-, sealant-remover) PC9c Finger paints Covers concentrations up to 50 %. PC9b_1 Fillers and putty PC9b_2 Plasters and floor equalisers Covers concentrations up to 2 %. PC9b_3 Modelling clay Covers concentrations up to 1 %. PC18 Ink and toners. Covers concentrations up to 10 %.

Amounts used

For each use event, covers use amounts up to 13800 g.
Unless otherwise stated.

PC1_1 Glues, hobby use For each use event, covers use amounts up to 9 g. PC1_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue) For each use event, covers use amounts up to 6390 g. PC1_3 Glue from spray For each use event, covers use amounts up to 85.5 g. PC1_4 Sealants For each use event, covers use amounts up to 75 g. PC9a_1 Water-borne latex wall paint For each use event, covers use amounts up to 2760 g. PC9a_2 Solvent-rich, high-solid, water-borne paint For each use event, covers use amounts up to 744 g. PC9a_3 Aerosol spray can For each use event, covers use amounts up to 215 g. PC9a_4 Removers (paint-, glue-, wallpaper-, sealant-remover) For each use event, covers use amounts up to 491 g. PC9b_1 Fillers and putty For each use event, covers use amounts up to 85 g. PC9b_2 Plasters and floor equalisers For each use event, covers use amounts up to 13800 g. PC9b_3 Modelling clay For each use event, avoid swallowing amounts more than 1 g. PC9c Finger paints For each use event, avoid swallowing amounts more than 1.35 g. PC18 Ink and toners. For each use event, covers use amounts up to 40 g. PC9b_1 Fillers and putty PC9b_2 Plasters and floor equalisers Covers frequency up to 12 days/year, , .

Frequency and duration of use

Covers daily exposure up to 6hours
Unless otherwise stated.

PC1_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue) PC9a_2 Solvent-rich, high-solid, water-borne paint Covers frequency up to 1 days/year, , . PC1_3 Glue from spray Covers frequency up to 6 days/year, , . PC9a_1 Water-borne latex wall paint Covers frequency up to 4 days/year, , . PC9a_3 Aerosol spray can Covers frequency up to 2 days/year, , . PC9a_4 Removers (paint-, glue-, wallpaper-, sealant-remover) Covers frequency up to 3 days/year, , .

Human factors not influenced by risk management

Potentially exposed body parts

Covers skin contact area up to 857.5 cm². Unless otherwise stated.

Uses in Coatings - Consumer

PC1_1 Glues, hobby use PC1_3 Glue from spray PC1_4 Sealants PC9b_1 Fillers and putty
Covers skin contact area up to 35.73 cm². PC1_2 Glues DIY-use (carpet glue, tile glue, wood
parquet glue) Covers skin contact area up to 110 cm². PC9a_1 Water-borne latex wall paint
PC9a_2 Solvent-rich, high-solid, water-borne paint Covers skin contact area up to 428.75 cm².
PC9a_4 Removers (paint-, glue-, wallpaper-, sealant-remover) PC9b_2 Plasters and floor
equalisers Covers skin contact area up to 857.50 cm². PC9b_3 Modelling clay PC9c Finger
paints Covers skin contact area up to 254.40 cm². PC18 Ink and toners. Covers skin contact
area up to 71.40 cm².

Other given operational conditions affecting Non-industrial exposure

Temperature	Covers use at ambient temperatures.
Room size	Covers use in room size of 20 m ³ .
Ventilation rate	Covers use under typical household ventilation.
	PC9a_3 Aerosol spray can Covers use in a one car garage (34 m ³) under typical ventilation.

Other given operational conditions affecting Non-industrial exposure

Exposure time	PC1_1 Glues, hobby use PC1_3 Glue from spray PC9b_1 Fillers and putty For each use, avoid using for more than 4 hours. PC1_4 Sealants For each use, avoid using for more than 1 hour. PC9a_1 Water-borne latex wall paint PC9a_2 Solvent-rich, high-solid, water-borne paint PC18 Ink and toners. For each use, avoid using for more than 2.2 hours. PC9a_3 Aerosol spray can. For each use, avoid using for more than 0.33 hours. PC9a_4 Removers (paint-, glue-, wallpaper-, sealant-remover) PC9b_2 Plasters and floor equalisers For each use, avoid using for more than 2 hours.
---------------	---

2. Conditions of use affecting exposure (Non-industrial - Health 2)

Control of Non-industrial exposure

PC4 Anti-freeze and de-icing products. PC15 Non-metal-surface treatment products. PC24
Lubricants, greases and release products. PC31 Polishes and wax blends.

Product characteristics

Physical state	Liquid, vapour pressure > 10 Pa (STP)
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated. PC4_1 Washing car window Covers concentrations up to 1 %. PC4_2 Pouring into radiator Covers concentrations up to 10 %. PC4_3 Lock de-icer PC15 Non-metal-surface treatment products. PC9a_3 Aerosol spray can. PC9a_4 Removers (paint-, glue-, wallpaper-, sealant- remover) PC24_3 Sprays PC31 Polishes and wax blends. Covers concentrations up to 50 %. PC15 Non-metal-surface treatment products. PC9a_1 Water-borne latex wall paint Covers concentrations up to 1.5 %. PC15 Non-metal-surface treatment products. PC9a_2 Solvent- rich, high-solid, water-borne paint Covers concentrations up to 27.5 %. PC24_2 Pastes Covers concentrations up to 20 %.

Amounts used

For each use event, covers use amounts up to 13800 g.
Unless otherwise stated.

Uses in Coatings - Consumer

PC4_1 Washing car window For each use event, covers use amounts up to 0.5 g. PC4_2 Pouring into radiator For each use event, covers use amounts up to 2000 g. PC4_3 Lock de-icer For each use event, covers use amounts up to 4 g. PC15 Non-metal-surface treatment products. PC9a_1 Water-borne latex wall paint For each use event, covers use amounts up to 2760 g. PC15 Non-metal-surface treatment products. PC9a_2 Solvent-rich, high-solid, water-borne paint For each use event, covers use amounts up to 744 g. PC15 Non-metal-surface treatment products. PC9a_3 Aerosol spray can For each use event, covers use amounts up to 215 g. PC15 Non-metal-surface treatment products. PC9a_4 Removers (paint-, glue-, wallpaper-, sealant-remover) For each use event, covers use amounts up to 491 g. PC24_1 Liquids For each use event, covers use amounts up to 2200 g. PC24_2 Pastes For each use event, covers use amounts up to 34 g. PC24_3 Sprays For each use event, covers use amounts up to 73 g. PC31_1 Polishes, wax/cream (floor, furniture, shoes) For each use event, covers use amounts up to 142 g. PC31_2 Polishes, spray (furniture, shoes) For each use event, covers use amounts up to 35 g.

Frequency and duration of use

Covers daily exposure up to hours
Unless otherwise stated.

PC15 Non-metal-surface treatment products. PC9a_1 Water-borne latex wall paint PC24_1 Liquids Covers frequency up to 4 days/year, , . PC15 Non-metal-surface treatment products. PC9a_2 Solvent-rich, high-solid, water-borne paint Covers frequency up to 6 days/year, , . PC15 Non-metal-surface treatment products. PC9a_2 Solvent-rich, high-solid, water-borne paint PC24_3 Sprays Covers frequency up to 6 days/year, , . PC15 Non-metal-surface treatment products. PC9a_3 Aerosol spray can Covers frequency up to 2 days/year, , . PC15 Non-metal-surface treatment products. PC9a_4 Removers (paint-, glue-, wallpaper-, sealant-remover) Covers frequency up to 3 days/year, , . PC24_2 Pastes Covers frequency up to 10 days/year, , . PC31_1 Polishes, wax/cream (floor, furniture, shoes) Covers frequency up to 29 days/year, , . PC31_2 Polishes, spray (furniture, shoes) Covers frequency up to 8 days/year, , .

Human factors not influenced by risk management

Potentially exposed body parts

Covers skin contact area up to 857.5 cm². Unless otherwise stated.

PC4_2 Pouring into radiator PC15 Non-metal-surface treatment products. PC9a_1 Water-borne latex wall paint PC15 Non-metal-surface treatment products. PC9a_2 Solvent-rich, high-solid, water-borne paint Covers skin contact area up to 428 cm². PC4_3 Lock de-icer Covers skin contact area up to 214.4 cm². PC24_1 Liquids PC24_2 Pastes Covers skin contact area up to 468 cm². PC31 Polishes and wax blends. Covers skin contact area up to 430 cm².

Other given operational conditions affecting Non-industrial exposure

Temperature

Covers use at ambient temperatures.

Room size

Covers use in room size of 20 m³.

Ventilation rate

Covers use under typical household ventilation.

PC4 Anti-freeze and de-icing products. PC15 Non-metal-surface treatment products. PC9a_3 Aerosol spray can PC24_1 Liquids Covers use in a one car garage (34 m³) under typical ventilation.

Other given operational conditions affecting Non-industrial exposure

Uses in Coatings - Consumer

Exposure time	PC4_1 Washing car window For each use, avoid using for more than 0.02 hours. PC4_2 Pouring into radiator For each use, avoid using for more than 0.17 hours. PC4_3 Lock de-icer For each use, avoid using for more than 0.25 hours. PC15 Non-metal-surface treatment products. PC9a_1 Water-borne latex wall paint PC15 Non-metal-surface treatment products. PC9a_2 Solvent-rich, high-solid, water-borne paint For each use, avoid using for more than 2.2 hours. PC15 Non-metal-surface treatment products. PC9a_3 Aerosol spray can PC31_2 Polishes, spray (furniture, shoes) For each use, avoid using for more than 0.33 hours. PC15 Non-metal-surface treatment products. PC9a_4 Removers (paint-, glue-, wallpaper-, sealant-remover) For each use, avoid using for more than 2 hours. PC24_1 Liquids For each use, avoid using for more than 0.17 hours. PC31_1 Polishes, wax/cream (floor, furniture, shoes) For each use, avoid using for more than 1.23 hours.
----------------------	---

2. Conditions of use affecting exposure (Non-industrial - Health 3)

Control of Non-industrial exposure

PC8 Biocidal products

Product characteristics

Physical state Liquid, vapour pressure > 10 Pa (STP)

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

PC8_1 Laundry and dish-washing products PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) Covers concentrations up to 5 %. PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers concentrations up to 15 %.

Amounts used

For each use event, covers use amounts up to 13800 g.
Unless otherwise stated.

PC8_1 Laundry and dish-washing products For each use event, covers use amounts up to 15 g. PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) For each use event, covers use amounts up to 27 g. PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) For each use event, covers use amounts up to 35 g.

Frequency and duration of use

Covers daily exposure up to hours
Unless otherwise stated.

PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers frequency up to 128 days/year, , .

Human factors not influenced by risk management

Potentially exposed body parts Covers skin contact area up to 857.5 cm². Unless otherwise stated.

PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers skin contact area up to 428 cm².

Other given operational conditions affecting Non-industrial exposure

Temperature Covers use at ambient temperatures.

Room size Covers use in room size of 20 m³.

Ventilation rate Covers use under typical household ventilation.

Uses in Coatings - Consumer

Other given operational conditions affecting Non-industrial exposure

Exposure time	PC8_1 Laundry and dish-washing products For each use, avoid using for more than 0.5 hours. PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) For each use, avoid using for more than 0.33 hours. PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) For each use, avoid using for more than 0.17 hours.
----------------------	---

2. Conditions of use affecting exposure (Non-industrial - Health 4)

Control of Non-industrial exposure

PC23 Leather treatment products PC34 Textile dyes and impregnating products

Product characteristics

Physical state	Liquid, vapour pressure > 10 Pa (STP)
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated. PC23 Leather treatment products Covers concentrations up to 50 %. PC34 Textile dyes and impregnating products Covers concentrations up to 10 %.

Amounts used

For each use event, covers use amounts up to 13800 g.
Unless otherwise stated.

PC23 Leather treatment products For each use event, covers use amounts up to 56 g. PC34 Textile dyes and impregnating products For each use event, covers use amounts up to 115 g.

Frequency and duration of use

Covers daily exposure up to 6hours
Unless otherwise stated.

PC23 Leather treatment products PC31_1 Polishes, wax/cream (floor, furniture, shoes)
Covers frequency up to 29 days/year, , . PC23 Leather treatment products PC31_2 Polishes, spray (furniture, shoes) Covers frequency up to 8 days/year, , .

Human factors not influenced by risk management

Potentially exposed body parts	Covers skin contact area up to 857.5 cm ² . Unless otherwise stated. PC23 Leather treatment products Covers skin contact area up to 430 cm ² .
---------------------------------------	---

Other given operational conditions affecting Non-industrial exposure

Temperature	Covers use at ambient temperatures.
Room size	Covers use in room size of 20 m ³ .
Ventilation rate	Covers use under typical household ventilation.

Other given operational conditions affecting Non-industrial exposure

Exposure time	PC23 Leather treatment products PC31_1 Polishes, wax/cream (floor, furniture, shoes) For each use, avoid using for more than 1.23 hours. PC23 Leather treatment products PC31_2 Polishes, spray (furniture, shoes) For each use, avoid using for more than 0.33 hours. PC34 Textile dyes and impregnating products For each use, avoid using for more than 1 hours.
----------------------	---

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

Uses in Coatings - Consumer

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.
--------------------------	---

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Cleaning Agents - Consumer

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use in Cleaning Agents - Consumer
Process scope	Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products.
Product category	PC3 Air care products. PC4 Anti-freeze and de-icing products. PC8 Biocidal products PC8a Excipient only PC9a Coatings and paints, thinners, paint removers. PC24 Lubricants, greases and release products. PC35 Washing and cleaning products PC38 Welding and soldering products, flux products
Main sector	SU21 Consumer uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Control of Non-industrial exposure

PC3 Air care products. PC35 Washing and cleaning products

Product characteristics

Physical state	Liquid, vapour pressure > 10 Pa (STP)
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Use in Cleaning Agents - Consumer

PC3_1 Air care, instant action (aerosol sprays) Covers concentrations up to 50 %. PC3_2 Air care, continuous action (solid and liquid) Covers concentrations up to 10 %. PC35 Washing and cleaning products PC8_1 Laundry and dish-washing products PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) Covers concentrations up to 5 %. PC35 Washing and cleaning products PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers concentrations up to 15 %.

Amounts used

For each use event, covers use amounts up to 13800 g.
Unless otherwise stated.

PC3_1 Air care, instant action (aerosol sprays) For each use event, covers use amounts up to 0.1 g. PC3_2 Air care, continuous action (solid and liquid) For each use event, covers use amounts up to 0.48 g. PC3_1 Air care, instant action (aerosol sprays) PC8a Excipient only For each use event, covers use amounts up to 5 g. PC35 Washing and cleaning products PC8_1 Laundry and dish-washing products For each use event, covers use amounts up to 15 g. PC35 Washing and cleaning products PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) For each use event, covers use amounts up to 27 g. PC35 Washing and cleaning products PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) For each use event, covers use amounts up to 35 g.

Frequency and duration of use

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

PC35 Washing and cleaning products PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers frequency up to 128 days/year, , .

Human factors not influenced by risk management

Potentially exposed body parts Covers skin contact area up to 857.5 cm². Unless otherwise stated.

PC3_2 Air care, continuous action (solid and liquid) Covers skin contact area up to 35.7 cm².
PC35 Washing and cleaning products PC24_3 Sprays Covers skin contact area up to 428 cm².

Other given operational conditions affecting Non-industrial exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).
Room size Covers use in room size of 20 m³.
Ventilation rate Covers use under typical household ventilation.

Other given operational conditions affecting Non-industrial exposure

Exposure time PC3_1 Air care, instant action (aerosol sprays) For each use, avoid using for more than 0.25 hours. PC3_2 Air care, continuous action (solid and liquid) For each use, avoid using for more than 8 hours. PC35 Washing and cleaning products PC8_1 Laundry and dish-washing products For each use, avoid using for more than 0.5 hours. PC35 Washing and cleaning products PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) For each use, avoid using for more than 0.33 hours. PC35 Washing and cleaning products PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) For each use, avoid using for more than 0.17 hours.

Use in Cleaning Agents - Consumer

2. Conditions of use affecting exposure (Non-industrial - Health 2)

Control of Non-industrial exposure

PC4 Anti-freeze and de-icing products. PC24 Lubricants, greases and release products.

Product characteristics

Physical state Liquid, vapour pressure > 10 Pa (STP)

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

PC4_1 Washing car window Covers concentrations up to 1 %. PC4_2 Pouring into radiator Covers concentrations up to 10 %. PC4_3 Lock de-icer PC24_3 Sprays Covers concentrations up to 50 %. PC24_2 Pastes Covers concentrations up to 20 %.

Amounts used

For each use event, covers use amounts up to 13800 g.
Unless otherwise stated.

PC4_1 Washing car window For each use event, covers use amounts up to 0.5 g. PC4_2 Pouring into radiator For each use event, covers use amounts up to 2000 g. PC4_3 Lock de-icer For each use event, covers use amounts up to 4 g. PC24_1 Liquids For each use event, covers use amounts up to 2200 g. PC24_2 Pastes For each use event, covers use amounts up to 34 g. PC24_3 Sprays For each use event, covers use amounts up to 73 g.

Frequency and duration of use

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

PC24_1 Liquids Covers frequency up to 4 days/year, , . PC24_2 Pastes Covers frequency up to 10 days/year, , . PC24_3 Sprays Covers frequency up to 6 days/year, , .

Human factors not influenced by risk management

Potentially exposed body parts Covers skin contact area up to 857.5 cm². Unless otherwise stated.

PC4_2 Pouring into radiator PC24_3 Sprays Covers skin contact area up to 428 cm². PC4_3 Lock de-icer Covers skin contact area up to 214.4 cm². PC24_1 Liquids PC24_2 Pastes Covers skin contact area up to 468 cm².

Other given operational conditions affecting Non-industrial exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Room size Covers use in room size of 20 m³. Unless otherwise stated.

Ventilation rate Covers use under typical household ventilation. Unless otherwise stated.

PC4 Anti-freeze and de-icing products. PC24_1 Liquids Covers use in a one car garage (34 m³) under typical ventilation.

Other given operational conditions affecting Non-industrial exposure

Exposure time PC4_1 Washing car window For each use, avoid using for more than 0.02 hours. PC4_2 Pouring into radiator PC24_1 Liquids PC24_2 Pastes For each use, avoid using for more than 0.17 hours. PC4_3 Lock de-icer For each use, avoid using for more than 0.25 hours.

2. Conditions of use affecting exposure (Non-industrial - Health 3)

Control of Non-industrial exposure

PC8 Biocidal products

Product characteristics

Use in Cleaning Agents - Consumer

Physical state	Liquid, vapour pressure > 10 Pa (STP)
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated. PC8_1 Laundry and dish-washing products PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) Covers concentrations up to 5 %. PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers concentrations up to 15 %.
<u>Amounts used</u>	For each use event, covers use amounts up to 13800 g. Unless otherwise stated. PC8_1 Laundry and dish-washing products For each use event, covers use amounts up to 15 g. PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) For each use event, covers use amounts up to 27 g. PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) For each use event, covers use amounts up to 35 g.
<u>Frequency and duration of use</u>	Covers daily exposures up to 8 hours (unless stated differently). PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers frequency up to 128 days/year, , .
<u>Human factors not influenced by risk management</u>	
Potentially exposed body parts	Covers skin contact area up to 857.5 cm². Unless otherwise stated. PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) Covers skin contact area up to 428 cm².
<u>Other given operational conditions affecting Non-industrial exposure</u>	
Temperature	Assumes activities are at ambient temperature (unless stated differently).
Room size	Covers use in room size of 20 m ³ .
Ventilation rate	Covers use under typical household ventilation.
<u>Other given operational conditions affecting Non-industrial exposure</u>	
Exposure time	PC8_1 Laundry and dish-washing products For each use, avoid using for more than 0.5 hours. PC8_2 Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) For each use, avoid using for more than 0.33 hours. PC8_3 Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) For each use, avoid using for more than 0.17 hours.

2. Conditions of use affecting exposure (Non-industrial - Health 4)

Control of Non-industrial exposure

PC9a Coatings and paints, thinners, paint removers.

Product characteristics

Physical state	Liquid, vapour pressure > 10 Pa (STP)
Concentration details	Covers concentrations up to 50 %.

Amounts used

For each use event, covers use amounts up to 491 g.

Use in Cleaning Agents - Consumer

Frequency and duration of use

Covers frequency up to 3 days/year, , .

Human factors not influenced by risk management

Potentially exposed body parts Covers skin contact area up to 857.5 cm². Unless otherwise stated.

Other given operational conditions affecting Non-industrial exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Room size Covers use in room size of 20 m³.

Ventilation rate Covers use under typical household ventilation.

Other given operational conditions affecting Non-industrial exposure

Exposure time For each use, avoid using for more than 2 hours.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario Lubricants - Consumer

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Lubricants - Consumer
Process scope	Covers the consumer use of formulated lubricants in closed and open systems, including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.
Product category	PC1 Adhesives, sealants. PC24 Lubricants, greases and release products. PC31 Polishes and wax blends.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
--------------------------------	--

2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Control of environmental exposure (Non-industrial)

No exposure assessment presented for the environment.

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Control of Non-industrial exposure

PC1 Adhesives, sealants.

Product characteristics

Lubricants - Consumer

Physical state Liquid, vapour pressure > 10 Pa (STP)

Concentration details Covers concentrations up to 30 %.

Amounts used

For each use event, covers use amounts up to 6390 g.
Unless otherwise stated.

PC1_1 Glues, hobby use For each use event, covers use amounts up to 9 g. PC1_3 Glue from spray For each use event, covers use amounts up to 85.05 g. PC1_4 Sealants For each use event, covers use amounts up to 75 g.

Frequency and duration of use

Covers daily exposure up to 6hours
Unless otherwise stated.

PC1_1 Glues, hobby use Covers exposure up to 4 hours per event. PC1_3 Glue from spray PC1_4 Sealants Covers exposure up to 1 hours per event. PC1_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue) Covers frequency up to 1 days/year, , . PC1_3 Glue from spray Covers frequency up to 6 days/year, , .

Human factors not influenced by risk management

Potentially exposed body parts Covers skin contact area up to 468 cm². Unless otherwise stated.

PC1_1 Glues, hobby use PC1_3 Glue from spray PC1_4 Sealants Covers skin contact area up to 35.73 cm². PC1_2 Glues DIY-use (carpet glue, tile glue, wood parquet glue) Covers skin contact area up to 110 cm².

Other given operational conditions affecting Non-industrial exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Room size Covers use in room size of 20 m³. Unless otherwise stated.

Ventilation rate Covers use under typical household ventilation. Unless otherwise stated.

2. Conditions of use affecting exposure (Non-industrial - Health 2)

Control of Non-industrial exposure

PC24 Lubricants, greases and release products.

Product characteristics

Physical state Liquid, vapour pressure > 10 Pa (STP)

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

PC24_2 Pastes Covers concentrations up to 20 %. PC24_3 Sprays Covers concentrations up to 50 %.

Amounts used

For each use event, covers use amounts up to 6390 g.
Unless otherwise stated.

PC24_1 Liquids For each use event, covers use amounts up to 2200 g. PC24_2 Pastes For each use event, covers use amounts up to 34 g. PC24_3 Sprays For each use event, covers use amounts up to 73 g.

Frequency and duration of use

Lubricants - Consumer

Covers daily exposure up to 6hours
Unless otherwise stated.

PC24_1 Liquids Covers frequency up to 4 days/year, , . Covers exposure up to 0.17 hours per event. PC24_2 Pastes Covers frequency up to 10 days/year, , . PC24_3 Sprays Covers frequency up to 6 days/year, , . Covers exposure up to 0.17 hours per event.

Human factors not influenced by risk management

Potentially exposed body parts Covers skin contact area up to 468 cm². Unless otherwise stated.

PC24_3 Sprays Covers skin contact area up to 428.75 cm².

Other given operational conditions affecting Non-industrial exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Room size Covers use in room size of 20 m³. Unless otherwise stated.

Ventilation rate Covers use under typical household ventilation. Unless otherwise stated.

PC24_1 Liquids Covers use in a one car garage (34 m³) under typical ventilation.

2. Conditions of use affecting exposure (Non-industrial - Health 3)

Control of Non-industrial exposure

PC31 Polishes and wax blends.

Product characteristics

Physical state Liquid, vapour pressure > 10 Pa (STP)

Concentration details Covers concentrations up to 50 %.

Amounts used

For each use event, covers use amounts up to 6390 g.
Unless otherwise stated.

PC31_1 Polishes, wax/cream (floor, furniture, shoes) For each use event, covers use amounts up to 142 g. PC31_2 Polishes, spray (furniture, shoes) For each use event, covers use amounts up to 35 g.

Frequency and duration of use

Covers daily exposure up to 6hours
Unless otherwise stated.

PC31_1 Polishes, wax/cream (floor, furniture, shoes) Covers frequency up to 29 days/year, , . Covers exposure up to 1.23 hours per event. PC31_2 Polishes, spray (furniture, shoes) Covers frequency up to 8 days/year, , . Covers exposure up to 0.33 hours per event.

Human factors not influenced by risk management

Potentially exposed body parts Covers skin contact area up to 430 cm².

Other given operational conditions affecting Non-industrial exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Room size Covers use in room size of 20 m³.

Ventilation rate Covers use under typical household ventilation.

3. Exposure estimation (Environment 1)

Lubricants - Consumer

No exposure assessment presented for the environment.

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.
--------------------------	---

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Functional Fluids - Consumer

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Functional Fluids - Consumer
Process scope	Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants.
Product category	PC16 Heat transfer fluids. PC17 Hydraulic fluids.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
--------------------------------	---

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure > 10 Pa (STP)
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Amounts used

Amount per use: 2200 g
Unless otherwise stated.

Frequency and duration of use

Covers frequency up to 4 days/year, . .
Application duration: 0.17 hours
Unless otherwise stated.

Human factors not influenced by risk management

Functional Fluids - Consumer

Potentially exposed body parts Covers skin contact area up to 468 cm². Unless otherwise stated.

Other given operational conditions affecting Non-industrial exposure

Temperature Covers use at ambient temperatures.

Ventilation rate Covers use in a one car garage (34 m³) under typical ventilation.

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Other Consumer Uses - Consumer

Identification

Product name	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
REACH registration number	01-2119463258-33-XXXX
EC number	919-857-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Other Consumer Uses - Consumer
Process scope	Consumer uses e.g. as a carrier in cosmetics/personal care products, perfumes and fragrances. Note: for cosmetic and personal care products, risk assessment only required for the environment under REACH as human health is covered by alternative legislation.
Product category	PC28 Perfumes, fragrances. PC39 Cosmetics, personal care.
Main sector	SU21 Consumer uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Control of environmental exposure (Non-industrial)

No exposure assessment presented for the environment.

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Control of Non-industrial exposure

No exposure assessment presented for human health.