SAFETY DATA SHEET
HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

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

1.1. Product identifier

Product name HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

Product number 20893

Synonyms; trade names SOLVESSO 150, SHELLSOL A150, REASOL EXTRA, SOLVENT NAPHTHA 150, EVERSOL 150, SOLVANT NAPHTA 90-20, CAROMAX 20, SOLVENT 150, SOLVAREX 10, SOLVANT NAPHTA 90-200, SOLVANT NAPHTA 90-200/VRAC, NAPHTHA HEAVY 150, SOLVANT N LOURD 150, DIAPROSIM PS 2520

REACH registration number 01-2119463588-24-XXXX

EC number 919-284-0

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

Identified uses Industrial Solvent For further information, see attached Exposure Scenario.

1.3. Details of the supplier of the safety data sheet

Supplier

Univar
Aquarius House
6 Mid Point Business Park
Bradford
BD3 7AY
+44 1274 267300
+44 1274 267306
sds@univar.com

1.4. Emergency telephone number

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

Sds No. 20893

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Carc. 2 - H351 Asp. Tox. 1 - H304 STOT SE 3 - H336

Environmental hazards Aquatic Chronic 2 - H411

2.2. Label elements

EC number 919-284-0

Pictogram

HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

Signal word	Danger
Hazard statements	H304 May be fatal if swallowed and enters airways. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P273 Avoid release to the environment. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P313 IF exposed or concerned: Get medical advice/ attention. P391 Collect spillage. 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 C10 AROMATICS >1% NAPHTHALENE
REACH registration number	01-2119463588-24-XXXX
EC number	919-284-0
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 if any discomfort continues. If breathing stops, provide artificial respiration.
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention. Do not induce vomiting.
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	Vapours may cause headache, fatigue, dizziness and nausea.
Ingestion	Convulsions. Central nervous system depression.
Skin contact	Skin irritation.
Eye contact	Irritation of eyes and mucous membranes.

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.

HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Specific hazards Oxides of the following substances: Carbon.

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 Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of spray mist and contact with skin and eyes. Provide adequate ventilation.

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 Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. 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 spilling. Avoid contact with skin and eyes. Avoid inhalation of vapours and spray/mists. Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a well-ventilated place.

Storage class Chemical storage.

7.3. Specific end use(s)

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

DNEL

Industry - Dermal; : 12.5 mg/kg/day
Industry - Inhalation; : 150 mg/m³
Consumer - Dermal; : 7.5 mg/kg/day
Consumer - Inhalation; : 32 mg/m³
Consumer - Oral; : 7.5 mg/kg/day

8.2. Exposure controls

HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

Protective equipment

Eye/face protection	The following protection should be worn: Chemical splash goggles. EN 166
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. 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. It is recommended that gloves are made of the following material: Nitrile rubber.
Other skin and body protection	Wear rubber apron. Wear rubber footwear.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. 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	Pungent.
Odour threshold	No specific test data are available.
pH	No information available.
Melting point	<-20°C
Initial boiling point and range	160 - 230°C
Flash point	> 62°C
Evaporation rate	0.05
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	0.1 kPa
Vapour density	>1
Relative density	0.899
Bulk density	898 kg/m³
Solubility(ies)	Insoluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	> 450°C
Decomposition Temperature	No information available.

HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

Viscosity	1.26 cSt @ 25°C
Explosive properties	No information available.
Explosive under the influence of a flame	Not considered to be explosive.
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	135
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 There are no known reactivity hazards associated with this product.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid heat. Avoid contact with the following materials: Strong oxidising agents. Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of the following substances: Carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat
Notes (oral LD_{50})	OECD 401

Acute toxicity - dermal

HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rat
Notes (dermal LD_{50})	OECD 402

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	4,688.0
Species	Rat
Notes (inhalation LC_{50})	OECD 403
ATE inhalation (vapours mg/l)	4,688.0

Skin corrosion/irritation

Animal data	OECD 404 Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Not irritating.

Respiratory sensitisation

Respiratory sensitisation	No information available.

Skin sensitisation

Skin sensitisation	- Guinea pig: OECD 406 Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro	Ames test: Negative.
Genotoxicity - in vivo	Chromosome aberration: Negative. This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity	Suspected of causing cancer.

Reproductive toxicity

Reproductive toxicity - fertility	Multi-generation study - NOAEL 2.74 mg/l, Inhalation, Rat F1
Reproductive toxicity - development	Teratogenicity: - NOAEL: > 450 mg/kg, Oral, Rat This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure	No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	NOAEL 300 mg/kg, Oral, Rat

Aspiration hazard

Aspiration hazard	No information available.

Inhalation	Irritating to respiratory system. Vapours may cause headache, fatigue, dizziness and nausea.
Ingestion	Harmful: may cause lung damage if swallowed.
Skin contact	Irritating to skin. Product has a defatting effect on skin. May cause allergic contact eczema.
Eye contact	Irritating to eyes.

SECTION 12: Ecological Information

HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

Ecotoxicity The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity Toxic to aquatic life.

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: > 2 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: > 3 mg/l, Daphnia magna

Acute toxicity - aquatic plants NOEC, 72 hours: 2.5 mg/l, Scenedesmus subspicatus

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 28 days: 0.487 mg/l, Oncorhynchus mykiss (Rainbow trout)

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.851 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability Inherently biodegradable.

Biodegradation - Degradation (%) 57.95: 28 days
OECD 301F

12.3. Bioaccumulative potential

Bioaccumulative potential The product contains potentially bioaccumulating substances.

Partition coefficient No information available.

12.4. Mobility in soil

Mobility The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

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 should be treated as controlled waste. Do not puncture or incinerate, even when empty.

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) 3082

UN No. (IMDG) 3082

HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

UN No. (ICAO)	3082
UN No. (ADN)	3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE)
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE)
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE)
Proper shipping name (ADN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE)

14.3. Transport hazard class(es)

ADR/RID class	9
ADR/RID classification code	M6
ADR/RID label	9
IMDG class	9
ICAO class/division	9
ADN class	9

Transport labels

14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ADN packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

EmS	F-A, S-F
ADR transport category	3
Emergency Action Code	•3Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(E)

HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

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 applicable.

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.

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 C10 AROMATICS >1% NAPHTHALENE

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.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: 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.
EC_{50}: 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)

Revision comments

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

Revision date

24/04/2018

Version number

2.000

Supersedes date

22/11/2016

SDS number

20893

SDS status

Approved.

HYDROCARBONS C10 AROMATICS >1% NAPHTHALENE

Hazard statements in full	H304 May be fatal if swallowed and enters airways. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H411 Toxic to aquatic life with long lasting effects.
Signature	Jacq Pattinson

Exposure scenario
Manufacture of substance

Identification

Product name	HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE
REACH registration number	01-2119463588-24-XXXX
EC number	919-284-0
Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 sds@univar.com

1. Title of exposure scenario

Main title	Manufacture of substance
Process scope	Manufacture of the substance or use as a process chemical or extraction agent within closed or contained systems. Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).
Main sector	SU3 Industrial uses SU8 Manufacture of bulk, large-scale chemicals (including petroleum products) SU9 Manufacture of fine chemicals SU10 Formulation [mixing] of preparations and/or re-packaging

Environment

Environmental release category	ERC1 Manufacture of substances. ERC4 Industrial use of processing aids in processes and products, not becoming part of articles.

Worker

Process category	PROC1 Use in closed process, no likelihood of exposure. PROC15 Use as laboratory reagent. PROC2 Use in closed, continuous process with occasional controlled exposure PROC3 Use in closed batch process (synthesis or formulation). PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises. PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities. PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.

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

Product characteristics

Manufacture of substance

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Annual amount per site: 9500 tonnes

Frequency and duration of use

Emission days: 100 days/year

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air	Treat air emission to provide a typical removal efficiency of 90%.
Water	Typical onsite wastewater treatment technology provides removal efficiency of 74.9%.
Soil	Do not apply industrial sludge to natural soils.

Conditions and measures related to external treatment of waste for disposal

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

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting	Indoor use.
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	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Organisational measures to prevent/limit releases, dispersion and exposure

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

Risk management measures

Manufacture of substance

Do not ingest. If swallowed, then seek immediate medical assistance.
Do not induce vomiting.
Handle product within a closed system.

3. Exposure estimation (Environment 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 (Environment 1)

Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Maximum Risk Characterisation Ratios for air emissions 0.00011 Maximum Risk Characterisation Ratios for wastewater emissions 0.21 Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

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

Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. 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

Identification

Product name	HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE
REACH registration number	01-2119463588-24-XXXX
EC number	919-284-0
Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 sds@univar.com

1. Title of exposure scenario

Main title	Distribution of substance
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 SU8 Manufacture of bulk, large-scale chemicals (including petroleum products) SU9 Manufacture of fine chemicals

Environment

Environmental release category	ERC1 Manufacture of substances. ERC2 Formulation of preparations. ERC3 Formulation in materials. ERC4 Industrial use of processing aids in processes and products, not becoming part of articles. ERC5 Industrial use resulting in inclusion into or onto a matrix. ERC6a Industrial use resulting in manufacture of another substance (use of intermediates). ERC6b Industrial use of reactive processing aids. ERC6c Industrial use of monomers for manufacture of thermoplastics. ERC6d Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers. ERC7 Industrial use of substances in closed systems.

Worker

Distribution of substance

Process category	PROC1 Use in closed process, no likelihood of exposure. PROC2 Use in closed, continuous process with occasional controlled exposure PROC3 Use in closed batch process (synthesis or formulation). PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises. PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities. PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing). PROC15 Use as laboratory reagent.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Annual amount per site: 0.29 tonnes
Maximum daily site tonnage: 15 kg

Frequency and duration of use

Emission days: 20 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.001
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.00001
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0.00001

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 94.6% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 94.6%

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air	Treat air emission to provide a typical removal efficiency of 90%.
Water	Typical onsite wastewater treatment technology provides removal efficiency of 0%.
Soil	Do not apply industrial sludge to natural soils.

Conditions and measures related to external treatment of waste for disposal

Sludge treatment	Sludge should be incinerated, contained or reclaimed.
Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.

Distribution of substance

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

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting Indoor use.

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 Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Organisational measures to prevent/limit releases, dispersion and exposure

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

Risk management measures

Do not ingest. If swallowed, then seek immediate medical assistance.
Do not induce vomiting.
Handle product within a closed system.

3. Exposure estimation (Environment 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

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

Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Maximum Risk Characterisation Ratios for air emissions 0.0000067 Maximum Risk Characterisation Ratios for wastewater emissions 0.0017 Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

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

Distribution of substance

Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. 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 an Intermediate

Identification

Product name	HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE
REACH registration number	01-2119463588-24-XXXX
EC number	919-284-0
Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 sds@univar.com

1. Title of exposure scenario

Main title	Use as an Intermediate
Process scope	Use of substance as an intermediate (not related to Strictly Controlled Conditions). Includes recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).
Main sector	SU3 Industrial uses SU8 Manufacture of bulk, large-scale chemicals (including petroleum products) SU9 Manufacture of fine chemicals

Environment

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

Worker

Process category	PROC1 Use in closed process, no likelihood of exposure. PROC15 Use as laboratory reagent. PROC2 Use in closed, continuous process with occasional controlled exposure PROC3 Use in closed batch process (synthesis or formulation). PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises. PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities. PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Use as an Intermediate

Amounts used

Daily amount per site: 1300 kg

Frequency and duration of use

Emission days: 20 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (after typical onsite RMMs): 0.001

Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.0003

Emission factor - soil Release fraction to soil from process (initial release prior to RMM): 0.001

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Good practice Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.

STP details Assumed onsite sewage treatment plant flow: 2000 m³/day
Estimated substance removal from wastewater via domestic sewage treatment: 94.6%

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air Treat air emission to provide a typical removal efficiency of 80%.

Conditions and measures related to external treatment of waste for disposal

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

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

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting Indoor use.

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 Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Use as an Intermediate

Organisational measures to prevent/limit releases, dispersion and exposure

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

Risk management measures

Do not ingest. If swallowed, then seek immediate medical assistance.
Do not induce vomiting.
Handle product within a closed system.

3. Exposure estimation (Environment 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

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

Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Maximum Risk Characterisation Ratios for air emissions 0.0000068 Maximum Risk Characterisation Ratios for wastewater emissions 0.014 Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

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

Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. 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 and (re)packing of substances and mixtures

Identification

Product name	HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE
REACH registration number	01-2119463588-24-XXXX
EC number	919-284-0
Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 sds@univar.com

1. Title of exposure scenario

Main title	Formulation and (re)packing of substances and mixtures
Process scope	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.
Main sector	SU3 Industrial uses SU10 Formulation [mixing] of preparations and/or re-packaging

Environment

Environmental release category	ERC2 Formulation of preparations.

Worker

Process category	PROC1 Use in closed process, no likelihood of exposure. PROC14 Production of preparations or articles by tabletting, compression, extrusion, pelletisation. PROC15 Use as laboratory reagent. PROC2 Use in closed, continuous process with occasional controlled exposure PROC3 Use in closed batch process (synthesis or formulation). PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises. PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact). PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities. PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing).

Formulation and (re)packing of substances and mixtures

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

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Amounts used

Annual amount per site: 70 tonnes
Daily amount per site: 7000 kg

Frequency and duration of use

Emission days: 10 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (after typical onsite RMMs): 0.01

Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.0002

Emission factor - soil Release fraction to soil from process (initial release prior to RMM): 0.0001

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Good practice Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.

STP details Assumed onsite sewage treatment plant flow: 2000 m³/day

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air Treat air emission to provide a typical removal efficiency of 80%.

Conditions and measures related to external treatment of waste for disposal

Sludge treatment Do not apply industrial sludge to natural soils.

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

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

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting Indoor use.

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

Formulation and (re)packing of substances and mixtures

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Organisational measures to prevent/limit releases, dispersion and exposure

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

Risk management measures

Do not ingest. If swallowed, then seek immediate medical assistance.
Do not induce vomiting.
Handle product within a closed system.

3. Exposure estimation (Environment 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

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

Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Maximum Risk Characterisation Ratios for air emissions 0.000015 Maximum Risk Characterisation Ratios for wastewater emissions 0.052752109 Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

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

Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. 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, C10, AROMATICS, >1% NAPHTHALENE
REACH registration number	01-2119463588-24-XXXX
EC number	919-284-0
Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 sds@univar.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

Environment

Environmental release category	ERC2 Formulation of preparations. ERC4 Industrial use of processing aids in processes and products, not becoming part of articles.

Worker

Process category	PROC10 Roller application or brushing of adhesive and other coating. PROC15 Use as laboratory reagent.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Daily amount per site: 30 kg
Annual amount per site: 0.6 tonne

Frequency and duration of use

Emission days: 20 days/year

Other given operational conditions affecting environmental exposure

Use in Laboratories - Industrial

Emission factor - air	Release fraction to air from process (after typical onsite RMMs): 0.025
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.02
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0.0001

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
STP details	Assumed onsite sewage treatment plant flow: 2000 m³/day Estimated substance removal from wastewater via domestic sewage treatment: 94.6%

Conditions and measures related to external treatment of waste for disposal

Sludge treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting	Indoor use.
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	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Organisational measures to prevent/limit releases, dispersion and exposure

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

Risk management measures

Do not ingest. If swallowed, then seek immediate medical assistance.
Do not induce vomiting.
Handle product within a closed system.

Use in Laboratories - Industrial

3. Exposure estimation (Environment 1)

Assessment method

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

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

Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Maximum Risk Characterisation Ratios for air emissions 0.0000069 Maximum Risk Characterisation Ratios for wastewater emissions 0.023 Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

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

Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. 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, C10, AROMATICS, >1% NAPHTHALENE
REACH registration number	01-2119463588-24-XXXX
EC number	919-284-0
Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 sds@univar.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

Environment

Environmental release category	ERC8a Wide dispersive indoor use of processing aids in open systems.

Worker

Process category	PROC10 Roller application or brushing of adhesive and other coating. PROC15 Use as laboratory reagent.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Daily amount per site: 0.00082 kg
Annual amount per site: 0.0003 tonne

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (after typical onsite RMMs): 0.5

Use in Laboratories - Professional

Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.5
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
STP details	Assumed onsite sewage treatment plant flow: 2000 m³/day Estimated substance removal from wastewater via domestic sewage treatment: 94.6%

Conditions and measures related to external treatment of waste for disposal

Sludge treatment	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Waste treatment	External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting	Indoor use.
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	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Organisational measures to prevent/limit releases, dispersion and exposure

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

Risk management measures

Do not ingest. If swallowed, then seek immediate medical assistance.
Do not induce vomiting.
Handle product within a closed system.

3. Exposure estimation (Environment 1)

Use in Laboratories - Professional

Assessment method

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

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

Further details on scaling and control technologies are provided in SpERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Maximum Risk Characterisation Ratios for air emissions 0.000023 Maximum Risk Characterisation Ratios for wastewater emissions 0.0017 Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

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

Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Risk Management Measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.